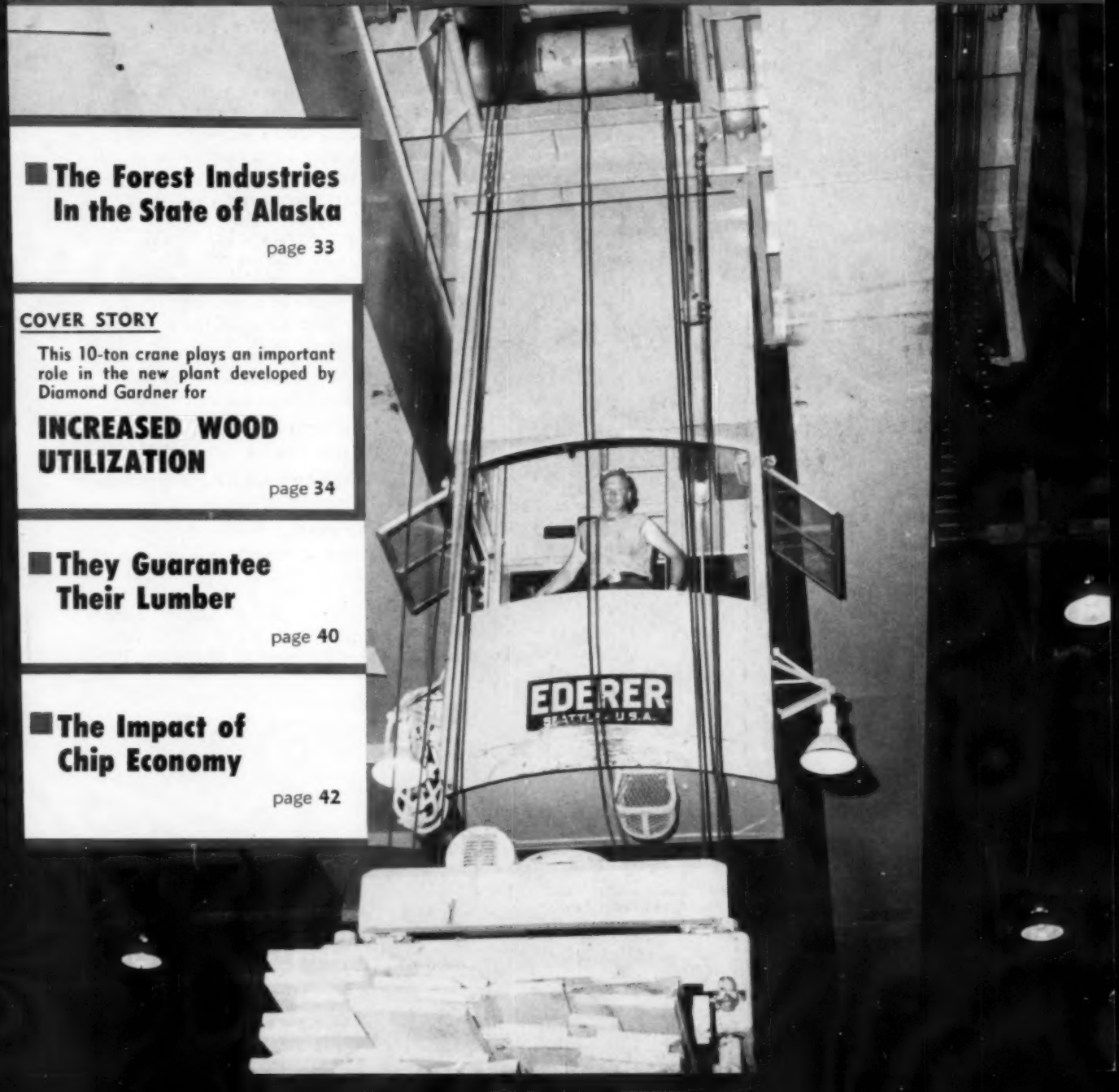
OCTOBER, 1958

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING



■ **The Forest Industries In the State of Alaska**
page 33

COVER STORY

This 10-ton crane plays an important role in the new plant developed by Diamond Gardner for

INCREASED WOOD UTILIZATION
page 34

■ **They Guarantee Their Lumber**
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■ **The Impact of Chip Economy**
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McGuire Lumber gets faster trips with P&H DIESEL

When Mr. Melvin McGuire, president of McGuire Lumber Yard, Yakima, Wash., checks with his son, Dale, on their Model 351 Peterbilt Truck he knows its 6-cyl. P&H Diesel is delivering "far above average performance." Dale says, "this P&H Engine takes grades with minimum shifting, results in faster trips, makes possible a 4,000 board feet increase in payload."

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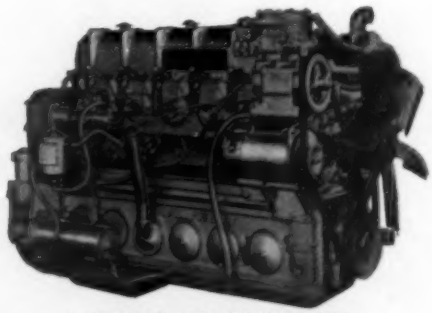

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This No. 977 does EVERYTHING

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High lift of the Cat No. 977 Traxcavator helps speed decking logs during periods the mill pond is full. This machine does many jobs well for the W. C. Albee Lumber Company, Eureka, Montana, which produces 8-foot two-by-fours and some one-by-fours from Douglas fir, larch and spruce. Largest of 3 Traxcavators in the Caterpillar line, the 100 HP No. 977 delivers more lift, faster lift and greater production than machines of other makes in its power range.

No one machine can do as many jobs as well as a Caterpillar-built Traxcavator with quick-change attachments. Take this No. 977, for instance, owned by the W. C. Albee Lumber Company, Eureka, Montana. The company's sawmill cuts from 50,000 to 55,000 bd. ft. an 8-hour day, and the No. 977 contributes many ways to profitable production. Using a lift fork, it decks logs, unloads trucks and handles lumber. Using a 'dozer, it levels the yard and plows snow. Using a bucket, it cleans out the log pond periodically.

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VOLUME 85 • NUMBER 10

OCTOBER, 1958

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

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FEATURES

THE FOREST INDUSTRIES IN ALASKA B. Frank Heintzleman, former U. S. Regional Forester of Alaska and also a former governor, reviews the economic outlook for the 49th state **Page 33**

INCREASED WOOD UTILIZATION at Diamond Gardner's integrated products center affords 15 million feet a year more fiber

COVER PICTURE: Lumber is handled in the dry storage shed at the new Red Bluff, California, operation with 10-ton Ederer crane. **Page 34**

(Staff Photo)

THEY GUARANTEE THEIR LUMBER through a 12-point quality control program **Page 40**

IMPACT OF CHIP ECONOMY led to doubling of sawmill production at one-fourth of the original investment at this Anderson, California, mill **Page 42**

GOOD PLANING PRACTICES in Englemann spruce and Lodgepole pine require attention to moisture, knife cuts and depth of cut, reports E. M. Davis, technologist, U. S. Forest Service **Page 44**

CHIP SURGE PROBLEM OVERCOME and production is increased with ingenious gate and storage bin at Molalla Forest Products Co. **Page 48**

NEW KILN INSTALLATION dries 12 million feet per month for Boise-Cascade, Inc. **Page 50**

PUBLIC RELATION PROGRAM includes a museum for the display of memorabilia linked with Northern California's lusty lumber history **Page 68**

ADDITION OF PLYWOOD PLANT increases utilization and gains stumpage cost advantage for Dwyer Lumber and Plywood Co., Portland, Ore. **Page 74**

INTEGRATED PARTICLE BOARD PLANT shares the finishing department with the plywood operation, using veneer residues as raw material **Page 80**

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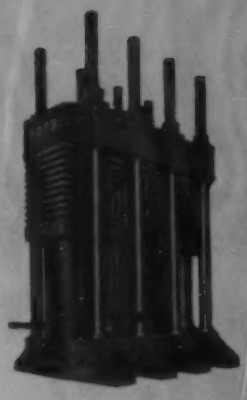

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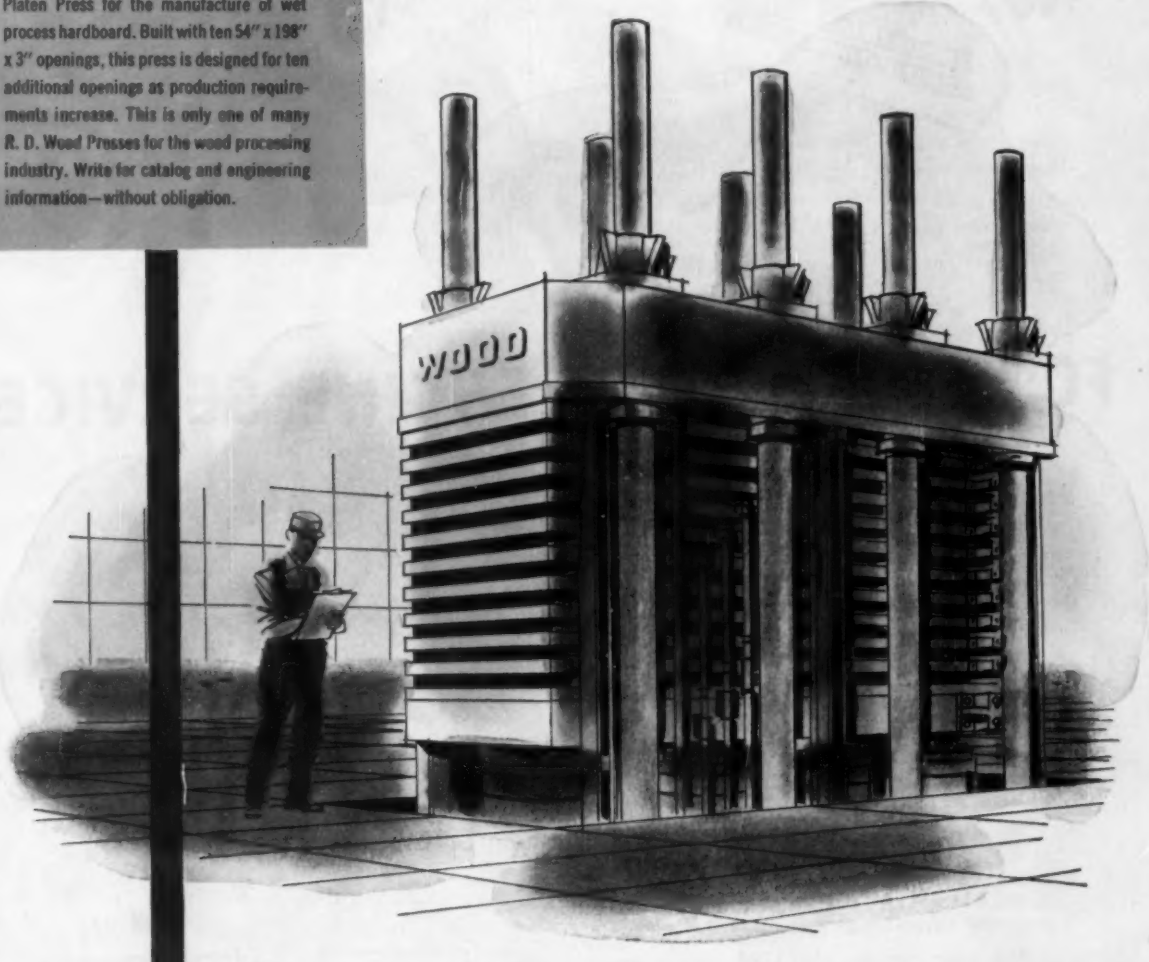

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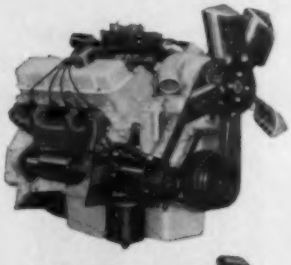
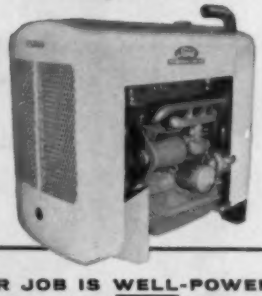
Also, there are now two Ford Diesels available—the Ford 220- and the new Ford 330-cubic inch Diesel. Write to us for the name of the Ford Industrial Power Headquarters nearest you.





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significant industry news

General Outlook . . .

CONSTRUCTION ACTIVITY UP . . . Dollar value of new construction in place, rose in August to a record monthly high of $4.8 billion, 3% above a year earlier, reports U. S. Departments of Labor and Commerce. Outlays for first 8 months of 1958 at $31.5 billion, were up slightly from the 1957 period. Private total for first 8 months was $21.9 billion, off slightly, as drop in industrial building was almost offset by gains in most other types of private work. Publicly owned construction totaled $9.7 billion, 6% above the previous year, mostly in highway expansion and public housing projects. Many look for a minimum of 1.3 million housing starts by end of 1958 while more conservative still predict 1.1 million starts with good carryover into 1959.

IMPROVED MARKETS FOR LUMBER PRODUCTS . . . have led many to predict that the recession for lumber products is over. With increased order files reported in all parts of the country and improved prices that will again allow the mills to operate at a profit, lumbermen are breathing easier. Car shortages, wet weather, full order files and strikes ahead, however, help to keep the market stronger. Nearly all areas are reporting healthy ratio of orders-to-production that will carry over through October.

SPOT STRIKES CALLED . . . West Coast strikes the first of September, followed union refusals to accept industry offers. Union tactics were to pick a few larger key operators and try to force settlement to set pattern for all of the industry. Over 2000 men walked off jobs on Sept. 3rd, at Pope & Talbot, Inc., Port Gamble, Wash.; Cascades Plywood Corp. plant at Lebanon, Ore., and International Paper Co. plywood mill at Longview, Wash. More followed. LSW executive committee had authorization to assess its 80,000 members $1 per day to support "those on the bricks". Legality of such collections was challenged by operators. Union was aiming at 25c per hour increase across the board. Settlement was for 7½c across the board and strikers all returned to work by Sept. 15.

PLYWOOD DISTRIBUTORS REPORT GOOD BUSINESS . . . as the directors of the National Plywood Distributors Association met in Portland early in September. Representatives from all parts of the country told of increased building and very much improved business, as both farm and non-farm construction has moved up during the past two months.

HARDWOOD PLYWOOD SHIPMENTS INCREASE . . . Final second quarter reports of hardwood plywood shipments (except for container and packaging plywood), amounted to 175.7 million square feet for 1958 second quarter, slightly over the 175.2 million sq. ft., for the first quarter of the year—Bureau of Census figures. This compares with 197.4 million sq. ft. shipped during the 2nd quarter of 1957. Breakdown showed veneer core plywood at 164.3 million sq. ft., and lumber core plywood at 11.4 million square feet.

REAL PICKUP IN BUSINESS . . . is reported by British Columbia operators, although they express disappointment with export trade. New labor agreement holding wages in line for another year has helped to stabilize the situation, together with improved housing starts in U. S. Usual U. K. exports have been off, not helped by longshore strikes.

More INDUSTRY NEWS on page 8

WOOD TREATING ON INCREASE . . . shown from 1957 statistics just released. An increase of 16.6 million cubic feet of wood was treated last year for protection against decay, termites, marine borers and fire. The production of 339 plants reporting, consumed 235,224,111 gallons of liquid preservatives and 21,937,295 pounds of solid preservatives. 80% of material reported was treated with creosote or creosote solution. Cross ties and poles accounted for 68% of total, lumber and timbers 15% and posts 5%.

NEW OFFICE AND LABORATORY TO BE BUILT BY HARDWOOD PLYWOOD OPERATORS . . . at Arlington, Va., will contain 4,000 sq. ft. The Hardwood Plywood Institute's new home office will consolidate the national office formerly in Chicago and the laboratory at Atlanta, according to Clark E. McDonald, managing director of HPI.

$9 MILLION BUDGET FOR OREGON STATE FORESTRY DEPARTMENT . . . has been approved by that state's Board of Forestry. Total for 1959-61 operational budget is $9,806,311. Authority to hire five additional foresters during first year of biennium and six for second year is also to be requested. Board also passed a resolution requesting state legislature to recognize importance of fair taxation to encourage tree farming.

PLYWOOD QUALITY CONTROL SERVICE . . . under the direction of Timber Engineering Co., Washington, D. C., is now being made available. This new independent service is testing to standards determined by U. S. Bureau of Standards. Now being utilized by three Oregon companies: Willamette National Lumber Co.; Plywood Products Corp., and Western Veneer & Plywood Co. Inspected panels will be stamped with TECO's qualifying stamp "Teco Tested in Accordance with Commercial Standard for Douglas Fir Plywood." Purpose according to William Swindells, president of Willamette National, is rigid quality control, tougher glue line testing and assurance of product quality.

BIG CONTROVERSY IN THE WEST . . . now is lumber freight rates between the Pacific Northwest and the California markets. Northern California operators oppose reduction of rates by Southern Pacific that would even up inter-state and intra-state rates. For the reduction are Pacific Northwest operators, who claim the present rates to be "discriminatory". Hearings are being held but it will probably take six months to arrive at conclusions. "Politicos" are being noncommittal.

COSTLY FIRE SEASON FOR BRITISH COLUMBIA . . . $30,000,000 worth of timber has been destroyed by fire in British Columbia this year, according to B. C. Forest Service estimates. There were a total of 3,868 fires throughout the province up to the end of August. Costs of fighting fires for period was $3,867,691. During same period of 1957 there were 1,317 fires.

On the Plant Front . . .

BUYS SOUTHERN MILLS . . . Alan Wetzel Lumber Co., of Baton Rouge, La., purchased the Rogers Brothers Lumber Co. sawmills at Waterproof, La., and Port Gibson, Miss. Additional hardwood production provided through purchase of these mills will supplement by 100% production being manufactured at the Wetzel plant at Natchez, Miss.

PENTA PLANT OPENED . . . Southern Pine Lumber Co., Diboll, Texas, placed their new Penta treating plant in operation the first part of October, to help handle the increasing pole and post markets in the fast-growing Texas area.

More INDUSTRY NEWS on page 10

High costs got you behind the eight ball?

See how you can reduce overhaul frequency with

Shell Rimula Oil

THE MODERN LUBRICANT FOR SEVERE SERVICE

Shell Rimula Oil was developed to counteract wear in heavy duty engines under *both* extremes: heavy loads and light loads.

This super heavy-duty oil extends the working life of engines in extreme service, reduces the frequency of costly overhauls. (Actual field tests prove Shell Rimula can reduce wear rates as much as ninety percent.)

Because it is effective far longer than ordinary oils for severe service, Rimula also saves you money on lubrication costs. Another economy is the fact that it permits operation on lower grade fuels *without penalty*.

Call your Shell representative this week. See how Shell Rimula Oil can help you make these savings in your operation.

SHELL

SHELL RIMULA OIL

- ✓ **the standard of quality in its field**
- ✓ **only oil of its type which consistently meets requirements for leading diesel engines**
- ✓ **effectively neutralizes harmful engine acids, major cause of engine wear**
- ✓ **developed by lubricant specialists at Shell research laboratories**

SPECIALTY REMANUFACTURING PLANT . . . Engineered Plywood, Inc., Grants Pass, Ore., has been established to serve as remanufacturing plant for the 16 mills in the area producing plywood, lumber, chipboard and hardboard. A double edge shaper can produce three carloads of Texture One-Eleven, shiplap or tongue and groove panels each 8 hours. Principals include Morritz Milbank, president; Nichols Milbank, treasurer; Dave S. Betcone, vice-president in charge of sales.

BRUCE BUYS WELSH PLYWOOD . . . Memphis, Tenn., flooring manufacturer, E. L. Bruce Co., recently acquired Welsh Plywood Corp., securing all Welsh stock in exchange for 10,000 shares of Bruce stock. Started after World War II, Welsh, also of Memphis, is a leading producer of pre-finished hardwood plywood, selling its products under the name of PlyWelsh. Bruce's management is in the midst of a fight for control headed by Edward M. Gilbert, a director of the Empire Millwork Corp., of New York City.

AUTOMATIC PREFINISHING PLANT . . . recently opened by Industrial Plywood Co., Inc., New York, will make facilities available to all manufacturers, distributors and users of plywood panels. To be known as Plywood Finishing Co., it is an answer to Japanese competition, according to Bernard Hewitt, chairman of the board. The plant has fully engineered automatic finishing line and will turn out 5000 panels daily with one man needed to operate.

U. S. PLYWOOD MOVES PURCHASING OFFICE . . . The West Coast purchasing office of United States Plywood Corp. has been moved from Seattle, Wash., to Eugene, Ore. According to Vice-President Gene Brewer, the move was made due to increasing number of independent mills that have been interested in having U. S. Plywood distribute their output. Central location of Eugene is more advantageous. Company's 114 branches funnel fir plywood orders through the purchasing office, directed by Wallace E. Williams.

NEW PABLO, MONTANA MILL . . . Plum Creek Lumber Co., Columbia Falls, Mont., largest producer in Montana's Flathead area, is constructing a mill to utilize Northern Pacific timber from Swan Valley and Thompson River tree farms. Plans call for sawmill to produce 1,000 carloads of wood products in 1959. Planer, dry kilns, barker and chipper are included in new operations.

BOX FACTORY CLOSES . . . Woodleaf Timber Corp. closed the Sacramento Box & Lumber Co. box plant, Sacramento, Calif., in operation since 1923. Woodleaf purchased the Sacramento plant, with other properties, in July. Too speculative, not economical, and not in line with firm's development plan, were given as reasons for closure.

MEXICAN PLYWOOD DISTRIBUTOR . . . Pine-Ply, Inc., has been established in El Paso, Texas, as the sole sales agent in the United States for the products of Triplay de Parral, S.A., newest plywood plant in Mexico at Parral, Chihuahua. Managed by Jack O'Brien, formerly with Vancouver Plywood, Vancouver, Wash., the plant has been in production about 90 days.

Personalities . . .

NEW WESTERN DIVISION MANAGER . . . for Weyerhaeuser Sales Co., is A. J. "Del" Daley, of St. Paul, Minn. Daley joins Weyerhaeuser Sales Company staff at Tacoma, Wash. Has been with Weyerhaeuser for 29 years. For past six years he was assistant manager of rail sales for coast mills at Tacoma. He replaces D. C. Greeley, who was recently named field operations manager of the timber company's newly-organized Silvatek and New Products Group.

WORTH WATCHING...

The "Touch of Gold" in Action

32 ALUNDUM G Bond wheels protect and improve high speed steel cutting tools*

Saw mill men like to watch saws, knives and cutterheads being given new life by Norton 32 ALUNDUM G Bond wheels.

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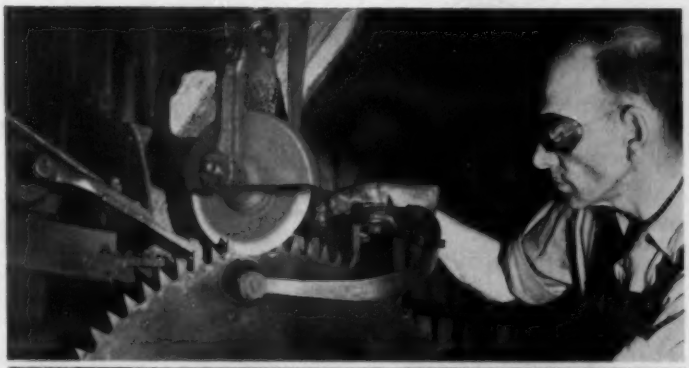
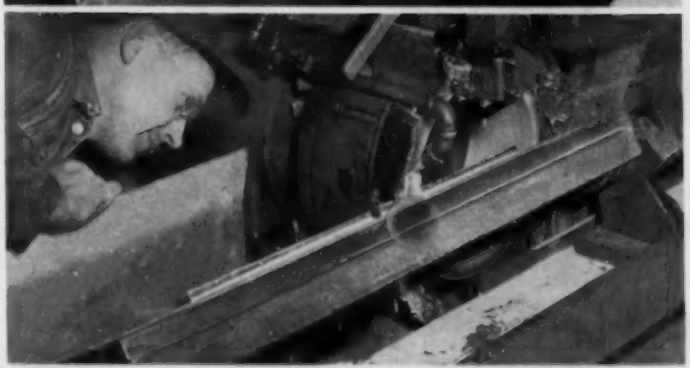
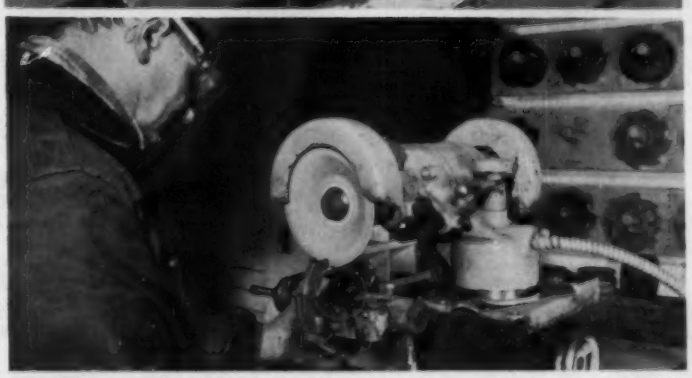
In your own mill, it will pay you to see how quickly and easily 32 ALUNDUM G Bond wheels can keep your production efficiency high and cut your sharpening costs. Contact your Norton Distributor for aid in selecting wheels and prompt deliveries. The Norton Santa Clara manufacturing plant supplies West Coast Distributors with wheels used by the lumber industry. NORTON COMPANY, Worcester 6, Mass. Plants and distributors around the world.







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Lumber Ad Program Starts in February

The advertising portion of lumber's $1 million-plus promotion program will be launched in February with a 4-page color ad in *Life* magazine. Plans for the program were revealed at a recent meeting of the advertising and promotion committee of the West Coast Lumbermen's Association in Portland, Ore., at which the west coast association outlined its own advertising and promotion plans which are designed to dove-tail with that of the national effort.

The national advertising program, a $675,000 item in the national effort, will include four later 1-page insertions in *Life*, monthly insertions in *Architectural Record* and *Architectural Forum*, six months of advertising efforts in two school journals, and 1-page insertions throughout the year in four builder journals.

Another major item in the national program is in the technical promotion area where the technical promotion staff of the National Lumber Manufacturers Association will be substantially enlarged, using funds from the National Wood Promotion Program. Field men will be selected to serve in geographic areas covering the country. They will work with architects, engineers, building code officials, contractors and other bulk consumers of lumber and wood products.

Other phases of the national program, pointed out at the WCLA meeting, include special booklets, product publicity and promotional material. A special effort is now being made to bring all elements of the industry into the promotion program.

The WCLA, at its meeting, reported that a Hemlock Use Book will soon be published, and that a booklet on standards and specifications for hemlock glue-laminated structures is now available.

●

Southern Pine Tells Machinery Show Plans

The drive for greater mechanical efficiency in the Southern Pine lumber industry has prompted the Southern Pine Association to sponsor another big machinery exposition at its annual meeting in 1959. The Machinery show will be April 11-13, the convention April 13-15.

S. P. Deas, association executive vice-president, says previous expositions have been credited as major stimulants to the Southern Pine lumber industry's drive for greater mechanical efficiency. In recent years, millions of dollars have been invested in plant modernization and improved materials handling and logging equipment.

Deas says prospective exhibitors for the 1959 show have been given the advance notice to provide ample time for arrangements and to assure maximum partitions "in an event of growing importance to both Southern lumber manufacturers and the suppliers of sawmill machinery and equipment."

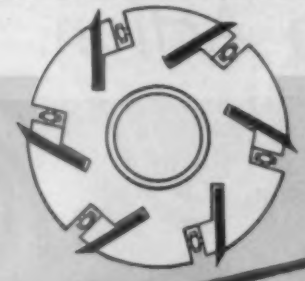
●

Lumber Merchandising Course Due in South

North Carolina State College, Raleigh, N. C. is establishing a 4-year course in lumber and building materials merchandising in its school of forestry in response to industrial needs, Dr. Richard J. Preston, dean of the school of forestry, has announced.

It will be the first such course in the South, the fifth in the nation. Other schools now offering such courses include Michigan State University, Syracuse University, the University of Minnesota and the University of Missouri.

The course, to be started this fall, will offer training in business methods, administration, sales, distribution, marketing and the technology of products and materials used in structures and construction work.



BALANCED SETS
for equal wear
and weight

WAPAKONETA
THIN PLANER KNIVES
cut top footage

SELECT the Wapakoneta knife steel engineered for the wood you are cutting:

- For general use . . . high-tungsten alloy steel offering great red hardness and long wear.
- For Southern pine and other soft woods . . . high-speed tungsten steel providing extra service with less danger of breakage.
- For extremely hard or mineral-streaked woods and glue joints . . . a super high-speed steel with abrasion resistance normally found only in expensive carbide steels.
- For western timbers . . . super-tough steel that resists abrasion and hard-as-steel knots.

Perfectly matched pairs are balanced both in weight and hardness . . . marked for easy identification. You get maximum production with minimum knife costs. Specify Wapakoneta Thin Planer Knives for rugged durability, even wear and smoothest surfacing.

Write for free catalog

THE WAPAKONETA
MACHINE COMPANY
WAPAKONETA "3"
OHIO

TRADE MARK

Knives Engineered for the Job Since 1891

also manufacturers of VENEER KNIVES • SHAPER STEEL • DOWEL and THICK SLOTTED KNIVES • CHIPPER KNIVES • CORRUGATED BACK KNIVES • HOG KNIVES • POLE KNIVES • PAPER KNIVES

How fast could your yard men pile 2256 boards?

Sitting at the controls of a Gerlinger fork lift truck this driver has moved 11,000 board feet of lumber from mill to pile in just a few minutes. Handling about 8 million feet yearly he puts a lot of extra dollars in the company till.

Your building materials never lag in their flow through mill, yard or warehouse when Gerlinger supplements your manpower. Pivotal steering, counter-active weight distribution and positive fingertip controls make these giant lift trucks as easy to maneuver as your family car. Moving 20 boards or 20 tons are the same to a Gerlinger.

New data folders are available free to show you many ways to benefit with Gerlinger equipment. Send coupon for the specs most widely used in the building materials field.

Leaders for 39 years in building Fork Lift Trucks, Tractors and Carriers

TOWMOTOR
THE ONE-MAN-GANG
-GERLINGER

*Gerlinger Carrier Co., Dallas, Oregon, is a subsidiary of Towmotor Corporation, Cleveland, Ohio

Today's industries need Gerlinger Continuous Operation

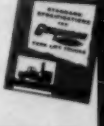
Gerlinger Fingertip Control makes this powerful lift truck simple and easy to operate. Motive, hoist and tilt levers are located within easy reach of operator's right hand.

Gerlinger Torqmatic Drive safeguards engine from damaging shocks, prevents stalling, eliminates gearshift guess and lessens driver fatigue. Extra operating ease is assured when Gerlinger Power Steering is added.

Gerlinger Material Carriers up to 30 tons capacity handle the biggest jobs you have. Straddling lumber, logs, timber and huge pallet loads of materials, they are extremely versatile.

☐ Send free Gerlinger Fork Lift Truck literature with specs

☐ Send free Certified Job Studies relating to lumber and building materials



Name_____

Company_____

Address_____

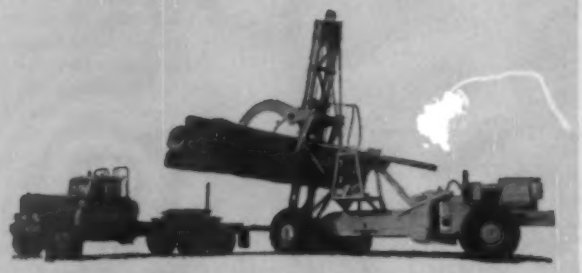
_____

Mail to **GERLINGER CARRIER CO.**, Dallas, Oregon

30 tons

LeTOURNEAU STACKER

THE ONE BIG MACHINE THAT SIMPLIFIES YARD OPERATIONS, SPEEDS PRODUCTION, CUTS COSTS



Name any log handling job in the yard—unloading trucks, sorting, decking, feeding the mill—the LeTourneau Log Stacker handles them all. With this one versatile machine and a single operator, many yards are doing the work of 3 machines and 5 men... increasing production thru the mill while substantially reducing log handling costs.

Maneuverability for a variety of jobs... power to do them quickly and efficiently . . . plus the rugged strength to handle 30-ton loads make the LeTourneau Log Stacker an outstanding performer. With all movements electrically powered and controlled, the Stacker's giant tusks function as sensitive "extensions" of the operator's hands—handling logs safely, surely.

Every ounce of available power is used directly at the point of work... none is lost through mechanical or hydraulic power-transfer systems. Tractive power is built into all four wheels—the famous LeTourneau Electric Wheel—with speed controlled in infinite ratios from zero to top speed. The extra-wide base low-pressure tires provide more contact area with the ground, cushioning shock and assuring traction thru muddy yards.

Case histories of on-the-job performance tell the full story of the LeTourneau Log Stacker. Learn how you can save money, build production, with a Stacker in your yard. Just fill in the coupon on the opposite page and mail in—or pick up the phone and call your local distributor. He'll give you full information. And there's no obligation, of course.

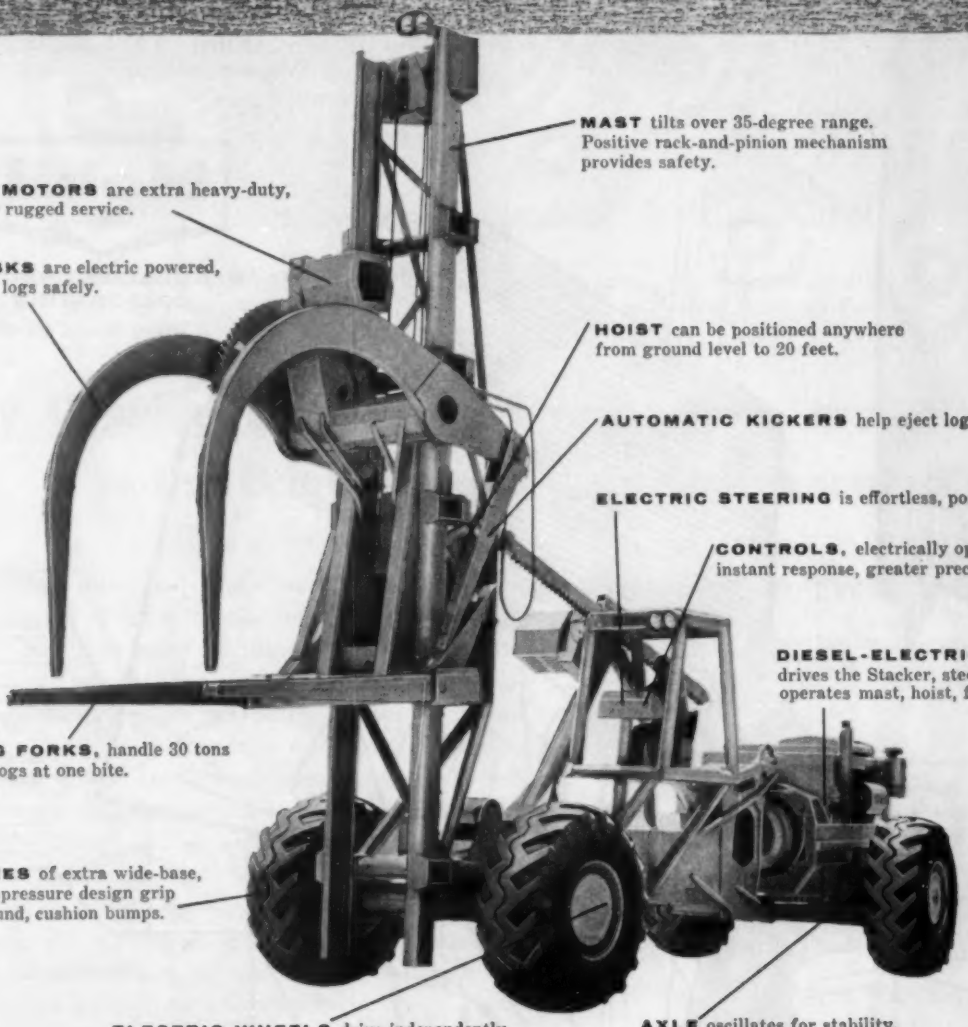
LET
Le TOURNEAU EQUIPMENT

R. G. LeTOURNEAU INC

LOGGING EQUIPMENT DIVISION

25410 SOUTH MacARTHUR • LONGVIEW, TEXAS

on the run



MAST tilts over 35-degree range. Positive rack-and-pinion mechanism provides safety.

AC MOTORS are extra heavy-duty, give rugged service.

TUSKS are electric powered, hold logs safely.

HOIST can be positioned anywhere from ground level to 20 feet.

AUTOMATIC KICKERS help eject logs.

ELECTRIC STEERING is effortless, positive.

CONTROLS, electrically operated, give instant response, greater precision.

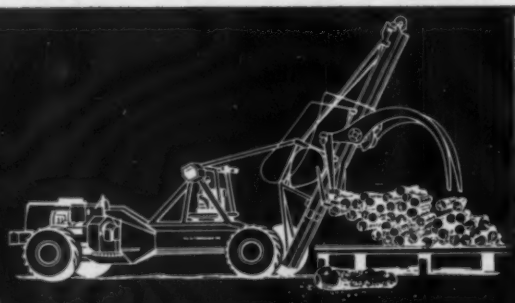
DIESEL-ELECTRIC POWER drives the Stacker, steers, brakes, operates mast, hoist, forks and tusks.

BIG FORKS, handle 30 tons of logs at one bite.

TIRES of extra wide-base, low-pressure design grip ground, cushion bumps.

ELECTRIC WHEELS drive independently, automatically proportion power.

AXLE oscillates for stability, maximum traction.



R. G. LeTOURNEAU, INC.
Logging Equipment Division
25410 South MacArthur, Longview, Texas

Please send me additional information about the Electric Log Stacker and the name of the nearest distributor.

Name_____ Title_____

Company_____

Address_____

City_____ State/Prov./Country_____

L-151

THE MAN FROM GP IS HERE

"The GP man can stop edge checking. Let's call him."

Edge checking and warping of stacked plywood can cause all kinds of headaches. And the worst is the down-grading of the product. This loses you money. Maybe it's happened to you.

If it has, here's a tip. Your local GP man has an exclusive wax-base end sealer called Ceremul M that prevents damage from moisture and exposure. One application of Ceremul M can prevent checking and warping for months, even when the plyboard is stacked outside in your yard. What's more, it's just as effective in preventing end checking on lumber, too. Ceremul M is available only through your local GP representative. He'll be glad to give you complete details. Why not start saving money today—give him a ring now?

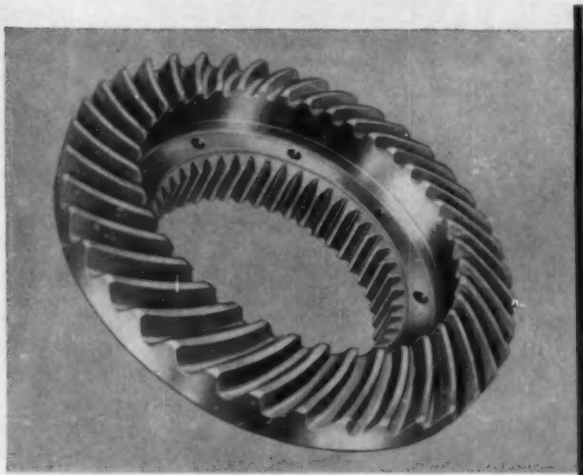
Mobil

GENERAL PETROLEUM CORPORATION

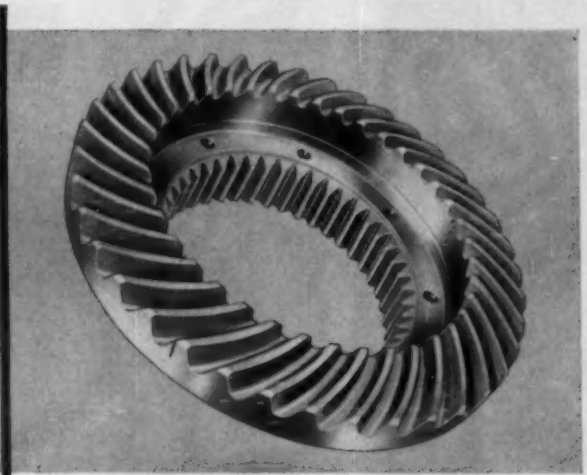
A Socony Mobil Company

L-151

They May Look Alike . . . but they're Not!



Replacement Ring-Gear
Made by Eaton—Axle Division



Replacement Ring-Gear
Not Made by Eaton

Only Genuine Eaton Axle Service Parts are Identical to the Original Production Components

Even Eaton Axle parts may wear out and require replacement. When this happens it is important that repairs be made with Genuine Eaton Axle Service Parts. They are identical to the original production components in design, metallurgy, heat treatment, and quality of finish—made to run together with the other axle parts. Eaton replacement parts are held to the rigid quality standards established for axle components and will deliver the same dependable, low-cost kind of service. So when, after thousands of miles of trouble-free operation, it may become necessary to replace worn parts in an Eaton Axle, it's most economical to make these replacements with Genuine Eaton Axle Service Parts.

MORE THAN TWO MILLION

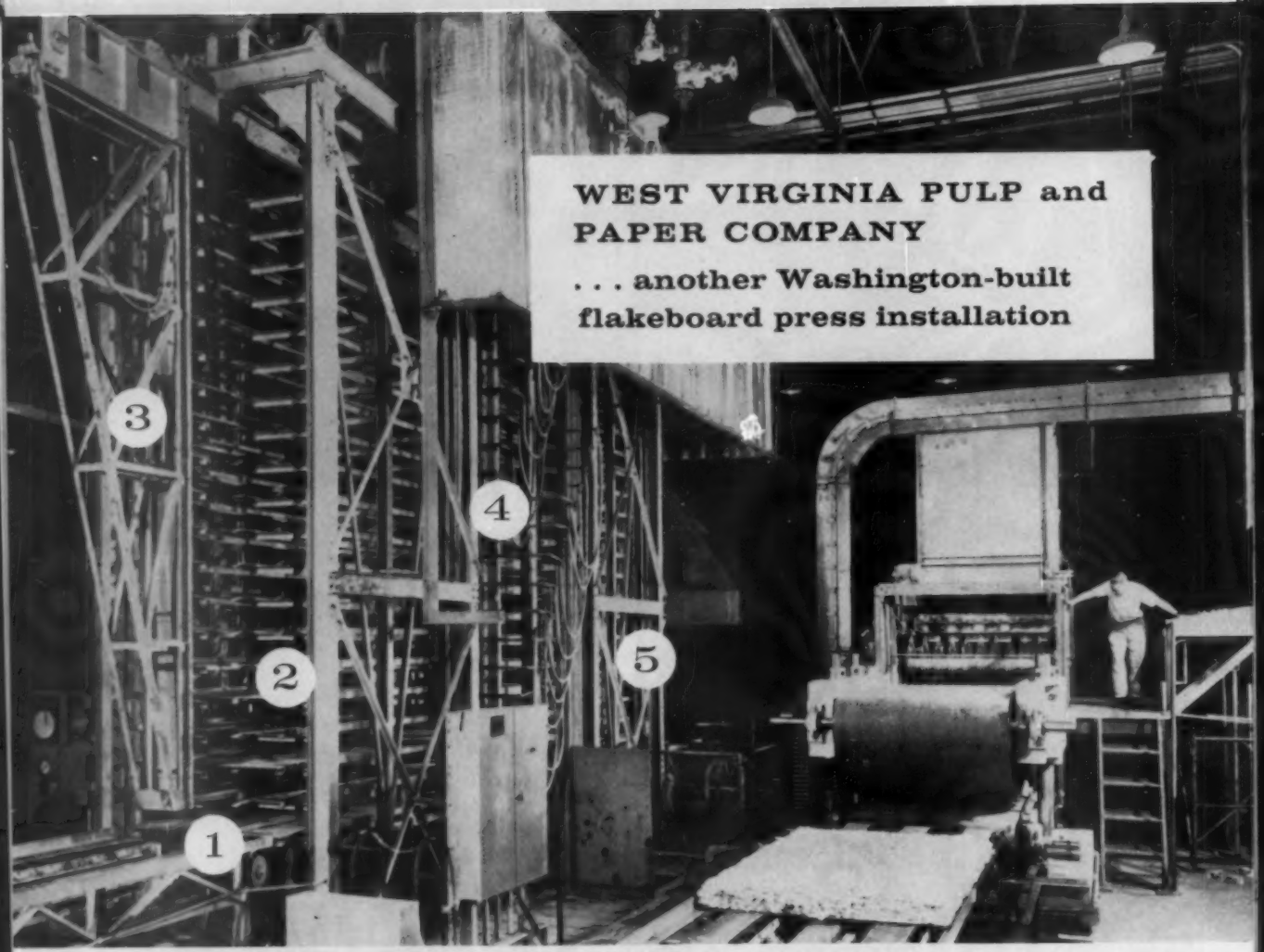
EATON

AXLES

IN TRUCKS TODAY

EATON — *AXLE DIVISION* — **MANUFACTURING COMPANY**
CLEVELAND, OHIO

PRODUCTS: Engine Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Hydraulic Pumps Motor Truck Axles • Permanent Mold Gray Iron Castings • Forgings • Heater-Defroster Units • Automotive Air Conditioners Fastening Devices • Cold Drawn Steel • Stampings • Gears • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers



WEST VIRGINIA PULP and PAPER COMPANY

. . . another Washington-built flakeboard press installation

In right foreground a flakeboard mat leaves the prepress on its way to final curing in the Washington-built pressing stage at the left. The injector (1) loads the mats into the elevator-type loader cage (2); with a full load of 20 mats the loader ram (3) moves the entire load into the 58" by 102" hydraulic press (4). Each load is compressed for a predetermined length of time under high and low pressures. At the completion of the low pressure cycle the press automatically opens and the unloader (5) removes cured boards from the press and ejects them one at a time onto the conveyor.

• • •

Still available are copies of the 16-page brochure "Washington presses and accessory equipment," featuring in-plant photographs, operating data and equipment diagrams of eight leading board plants. Included are particle board, flakeboard and wet and dry hardboard processes. Write to Washington Iron Works for FREE copy.

LOCATION: Tyrone, Pennsylvania
PLANT ENGINEERS: Miller Hofft Inc.
PRODUCT: Westvaco FLAKEBOARD

A 20-opening Washington hot press and companion loading and unloading equipment form the heart of the new million dollar plant marking the entry of West Virginia Pulp & Paper Co. into flakeboard manufacture.

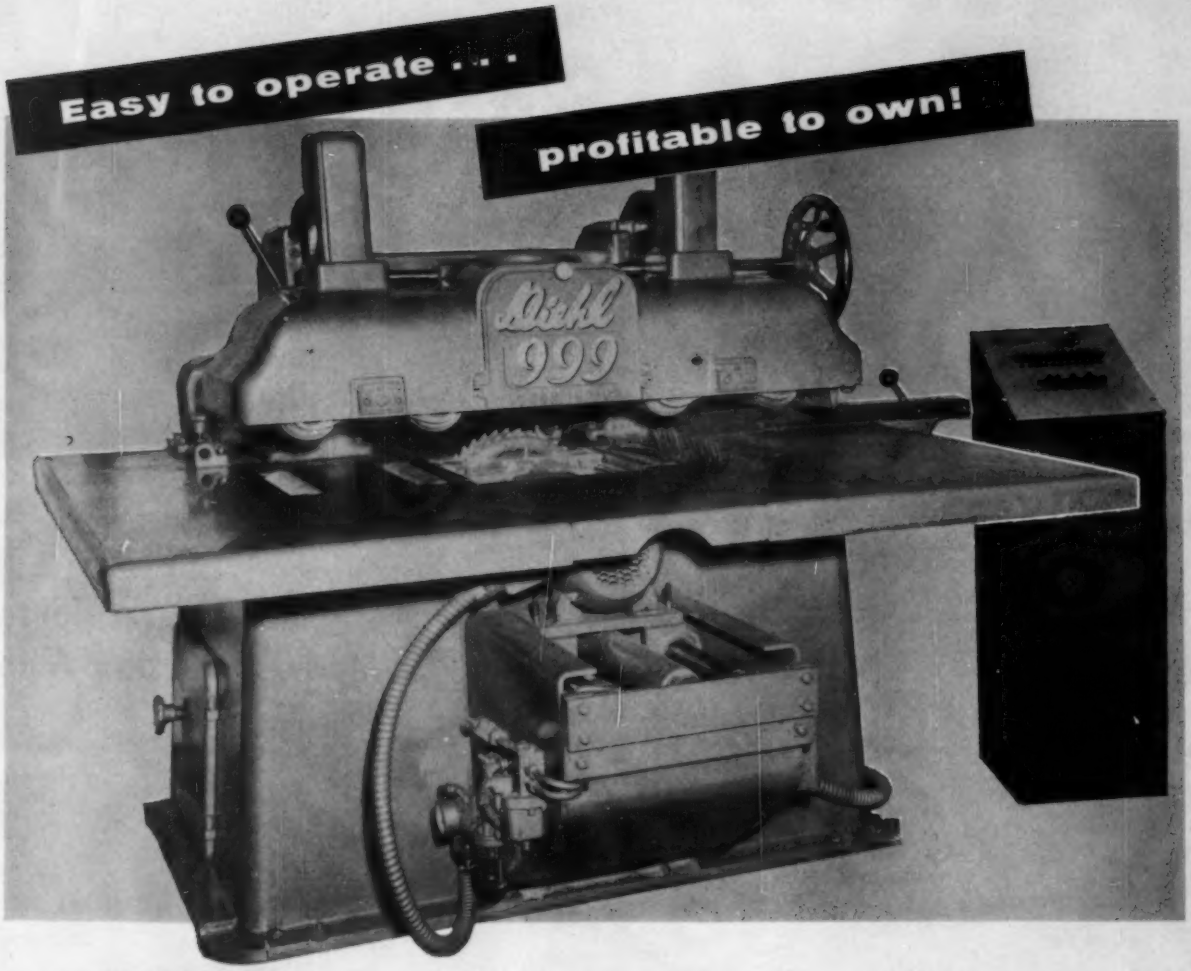
In this Miller Hofft system, Aspen billets are processed into Westvaco flakeboard in 30 to 40 minutes. Key to this high production is the fully automatic pressing stage. The Washington designed and built mat injector, elevator-type loader, press, elevator-type unloader and board ejector handle the curing process without manual control. Cycle time, heat and pressure are pre-set for completely automatic operation.

This is another example of the adaptability of Washington presses and accessory equipment to individual plant layout, process and product requirements of flakeboard, particle board or hardboard manufacture. For complete information write to Washington Iron Works, 1500 Sixth Avenue South, Seattle 4, Washington.

WASHINGTON presses and accessory equipment

HOT PLATE PRESSES • PULP BALING PRESSES • SPECIAL HYDRAULIC PRESSES • AUTOMATIC PRESS LOADERS AND UNLOADERS • COMPLETE DRY PROCESS HARDBOARD FORMING LINE EQUIPMENT

WASHINGTON IRON WORKS



high-production DIEHL No. 999 Two-Saw Edger!

Owners and operators agree: The Diehl No. 999 Two-Saw Edger is truly a high-quality, high-production, easy-to-operate machine built for the broadest range of woodworking applications—built for top profits in *every* application!

This new two-saw edger, with 2 independent 15 hp arbor motors, features 88 cutting widths in 1/8" increments, through 19 push buttons on a remote control panel, convenient for handling long stock.

Positioning is fast and accurate . . . to ±.002" net cut. Self-canceling push buttons release previous stops and energize new selections when actuated. Cutting width is indicated by control panel lights. The outboard arbor is adjustable for kerf variations.

The No. 999 Two-Saw Edger features feed speeds up to 206 fpm, with higher speeds available. Minimum width between blades is 1 5/8" and maximum width is 12 7/8". Simultaneous edging and ripping increases production *100%*.

An optional through guide is available to permit cutting to stock curvature for maximum yield through fix guide.

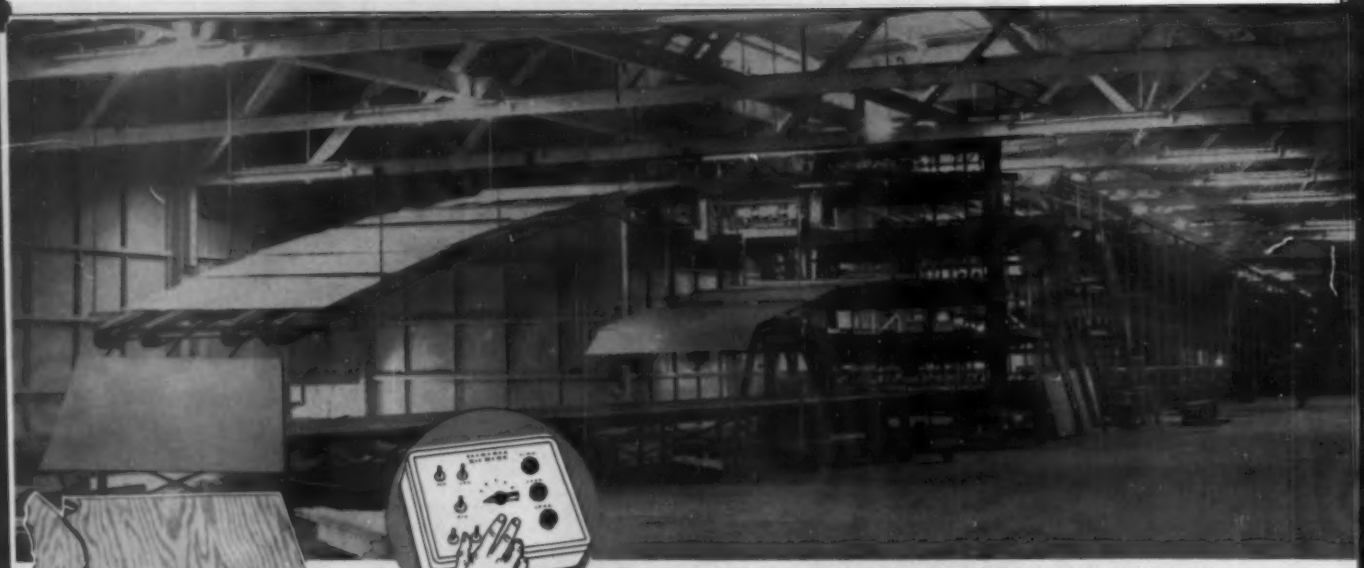
Get the facts on this sensational new two-saw edger. See for yourself why the Diehl No. 999 outperforms any other machine of its kind. Contact your local Exclusive Diehl Representative today or write directly to The G. M. Diehl Machine Works, Inc.

Frank E. Jones Machinery Corporation
1403-05 Santa Fe Avenue
Los Angeles 21, California

Tyee Machinery Company
1924 First Avenue South
Seattle 4, Washington

Rowney Machinery Company
600 - 16th Street
Oakland 12, California

Diehl



Redco automatic tray control system, U. S. Plywood Corp., Roseburg, Oregon

*from Fraser Mills to Martell**

Redco Automatic Tray Controls Figure Prominently on the Plywood Production Map

Redco automatic tray systems have been installed by these leading plywood producers:

ARCATA PLYWOOD
Arcata, California (2 units)
BINGEN VENEER
Bingen, Washington
CASCADES PLYWOOD
Reedsport, Oregon
CENTRALIA PLYWOOD
Centralia, Washington
CROWN ZELLERBACH CORP.
Fraser Mills, B. C. (2 units)
ROBERT DOLLAR LUMBER CO.
Glendale, Oregon
DRAIN PLYWOOD
Drain, Oregon (2 units
DURABLE PLYWOOD
Arcata, California
Calpella, California
FORT VANCOUVER PLYWOOD
Vancouver, Wash.
GEORGIA PACIFIC CORP.
Coos Bay, Oregon (2 units)
Toledo, Oregon
LINNTON PLYWOOD
Portland, Oregon
ORLEANS VENEER
Arcata, California
PENINSULA PLYWOOD
Port Angeles, Washington
PORT ORFORD PLYWOOD
Port Orford, Oregon
RODDISCRAFT, INC.
Arcata, California
TIMBER PRODUCTS CO.
Medford, Oregon
U. S. PLYWOOD CORP.
Roseburg, Oregon
WEYERHAEUSER TIMBER CO.
Longview, Washington
WINTON LUMBER CO.
Martell, California

Conspicuously on the map and prominently in the production picture at leading plywood plants from Fraser Mills, B. C. to Martell, California are Redco automatic tray control systems.

Redco engineered control systems operate simply and, yet at the same time, so effectively that the need for a tipple operator is completely eliminated. With automatic tray and tipple functions at the finger tip command of the lathe operator, increased production and improved grade recovery are quickly achieved.

Designed specifically to match the requirements of the plant, Redco tray control systems can be installed on Redco or any other equipment with a minimum of expense and downtime. Savings for the typical plant average over $5,000 per year per shift.

Before you invest in automation of any kind, check first with your Redco representative for dependable counsel and prompt quotations on the Redco system pin-pointed to your plant and your production problems.

* FRASER MILLS, B.C., MARTELL, CALIFORNIA

redco

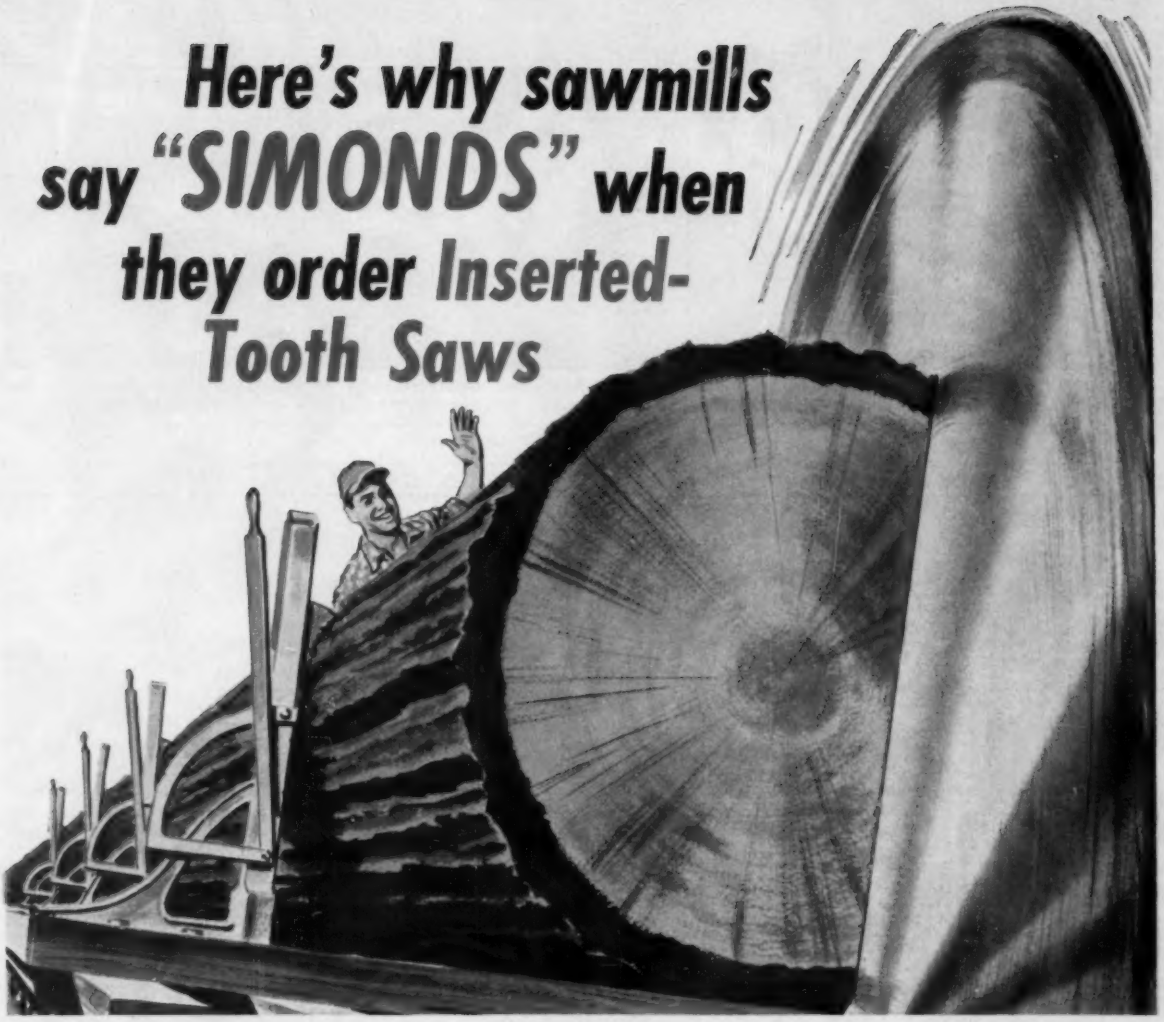
Republic ELECTRIC & DEVELOPMENT CO.

2627 Western Avenue — Seattle 3, Washington

Redco Engineered Equipment for the Forest Products Industry

Memory Systems
Edger Feeds
Set Works Controls
Log Carriage Drives
Remote Edger and Resaw Controls
Log Barker Drives

Here's why sawmills say "SIMONDS" when they order Inserted-Tooth Saws



Ask a mill man who's really got his operating costs licked, and like as not he'll tell you: "For my money, Simonds is the saw that earns its weight in gold . . . over and over!"

Nothing really remarkable about this. Simonds Saws *last* longer because Simonds has been *making* saws longer. And this extra margin of know-how is what it takes to produce uniformly straight-cutting saws that hold their tension, cut fast and straight under heavier feeds and higher speeds . . . and seldom if ever need hammering.

Yes, once you get the unmatched cost-cutting combination of Simonds Inserted-Tooth Saws, fitted with "Blue Tip" Bits and "Red Circle" Shanks, you'll be in business as you've never been before. So remember . . . say "Simonds" — *and save.*

For Fast Service from Complete Stocks Call your SIMONDS Industrial Supply DISTRIBUTOR

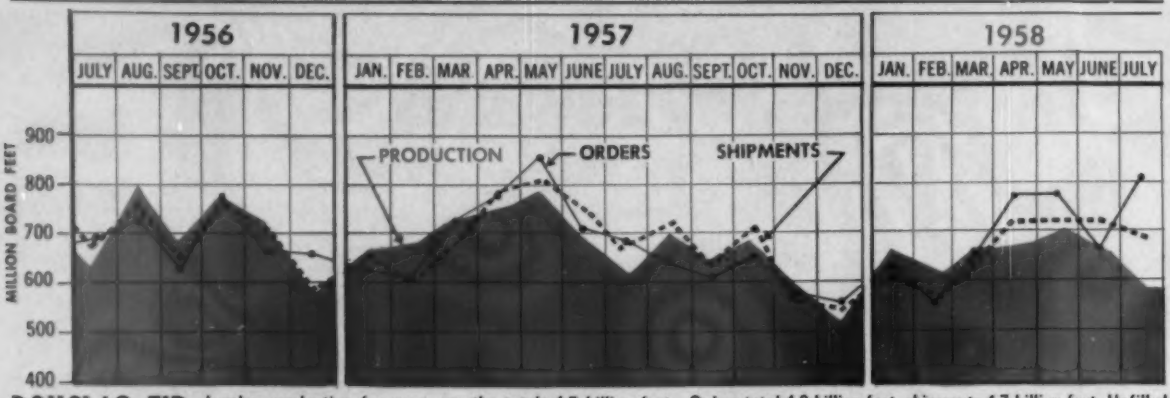
SIMONDS SAW AND STEEL CO. FITCHBURG, MASS.

Factory Branches in Boston, Chicago, Shreveport, La., San Francisco and Portland, Oregon
Canadian Factory in Montreal, Que., Simonds Divisions: Simonds Steel Mill, Lockport, N. Y.
Heller Tool Co., Newcomerstown, Ohio, Simonds Abrasive Co., Phila., Pa., and Arvida, Que., Canada

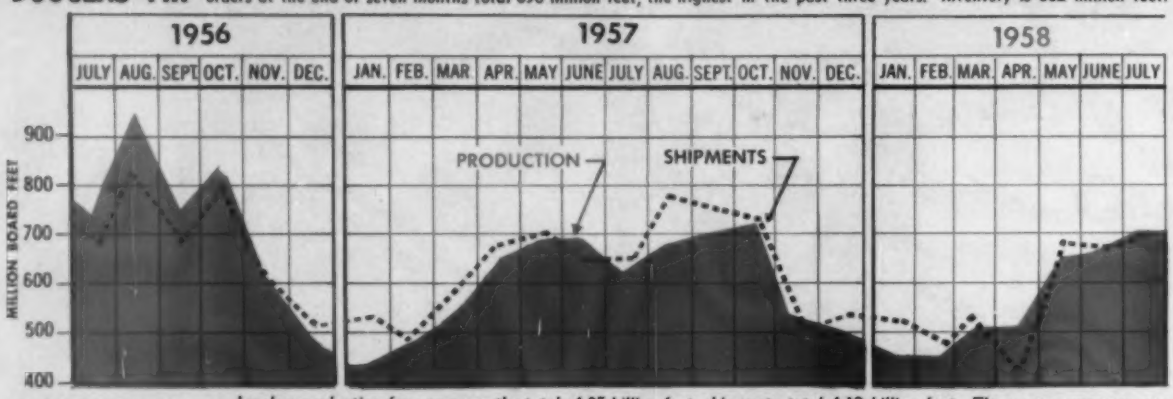
Other High Quality SIMONDS Woodworking Products

WIDE BAND SAWS & RESAWS | SOLID TOOTH CIRCULAR SAWS | CARBIDE TIPPED CIRCULAR SAWS | FILES | NARROW BAND SAWS | MACHINE KNIVES | SHAPER STEEL

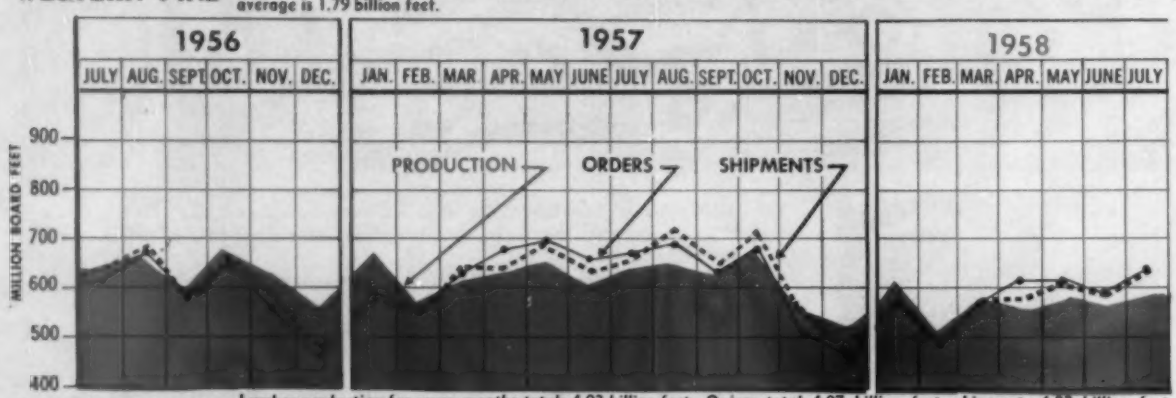
INDUSTRY TRENDS (See more TRENDS on page 62)



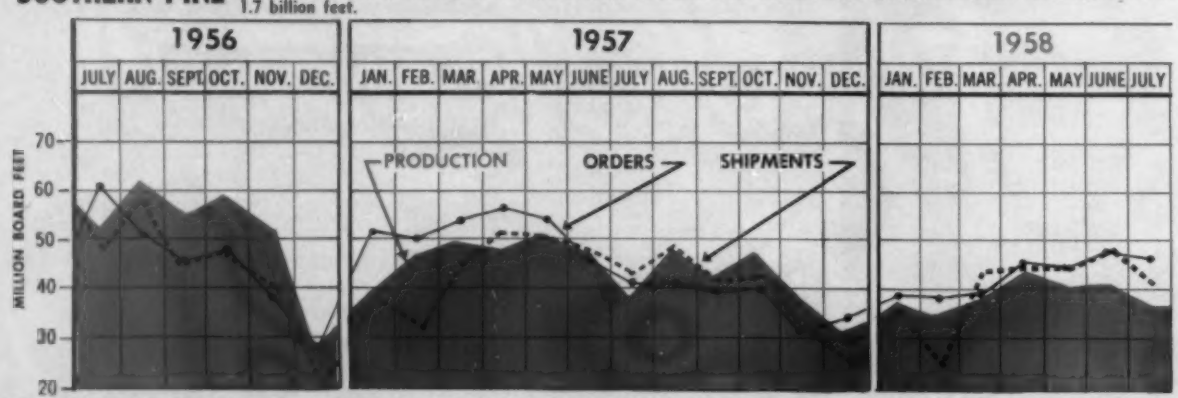
DOUGLAS FIR Lumber production for seven months totals 4.7 billion feet. Orders total 4.9 billion feet, shipments 4.7 billion feet. Unfilled orders at the end of seven months total 690 million feet, the highest in the past three years. Inventory is 882 million feet.



WESTERN PINE Lumber production for seven months totals 4.05 billion feet, shipments total 4.19 billion feet. Three-year averages are: production, 4.65 billion feet, shipments, 4.76 billion feet. Gross stocks on July 31 total 1.18 billion feet; three-year average is 1.79 billion feet.



SOUTHERN PINE Lumber production for seven months totals 4.03 billion feet. Orders total 4.07 billion feet, shipments 4.02 billion feet. Unfilled orders total 195 million feet, gross stocks 1.9 billion feet. Unsold stocks (gross stocks minus unfilled orders) are 1.7 billion feet.



REDWOOD Lumber production for seven months totals 270 million feet, shipments, 280 million feet, orders 294 million feet. Orders on hand on July 31 total 62 million feet. Stocks on hand on July 31 are reported at 376 million feet.

A COMPLETE LINE OF SPACE-SAVING RELAYS

UP TO 4 CONTACTS
2 Normally Open
2 Normally Closed
Measures only
3-5/16" high x 2-5/8" wide!

UP TO 6 CONTACTS
4 Normally Open
2 Normally Closed
Measures only
3-11/16" high x 2-13/16" wide!

NEW!

UP TO 10 CONTACTS
Either 6 Normally Open and
4 Normally Closed or
8 Normally Open and
2 Normally Closed
Measures only
5" high x 3" wide!

- 600 VOLTS • 10 AMPERES • LONG LIFE
- ALL THREE SIZES HAVE IDENTICAL MOUNTING HOLE DIMENSIONS

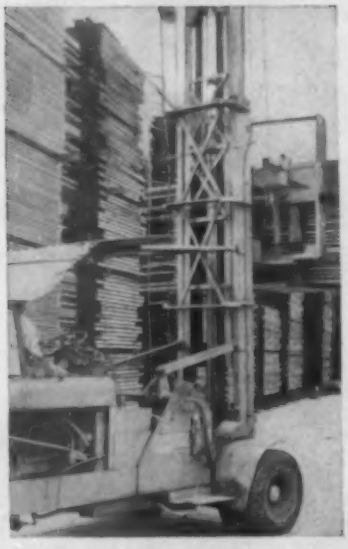
for the Complete Story, write for Bulletin 8501-D
Square D Company, 4335 Valley Blvd., Los Angeles 32, Calif.

EC&M HEAVY INDUSTRY ELECTRICAL EQUIPMENT...NOW A PART OF THE SQUARE D LINE

SQUARE D COMPANY

The log carriage on this band saw is equipped with Aeroquip Hose Lines.

Aeroquip Hose Lines Withstand Rugged Conditions in Saw Mill Operations



Hydraulic and engine lines on this Gerlinger lift truck are made with Aeroquip Hose and Reusable Fittings.

AT SIMPSON REDWOOD COMPANY PLANTS

One of the larger lumber companies in Northern California is Simpson Redwood Company. Aeroquip Flexible Hose Lines are used on saw mill machinery and lumber handling equipment operated by Simpson.

With Aeroquip Bulk Hose and Reusable Fittings, replacement hose lines can be assembled quickly in the mill or in the field. Hose inventory is simplified and costly downtime on equipment is held to a minimum. See your Yellow Page Phone Book for the Aeroquip Distributor near you.

Aeroquip

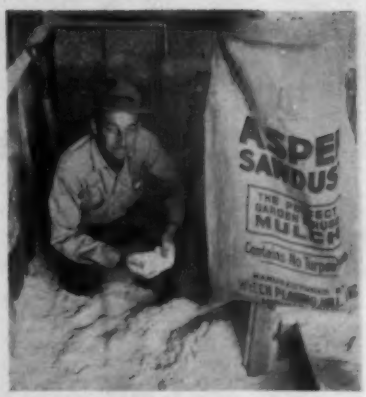
AEROQUIP CORPORATION, WESTERN DIVISION

BURBANK, CALIFORNIA

SALES OFFICE AND WAREHOUSE FOR OREGON, WASHINGTON AND IDAHO:

SPARKS AEROQUIP NORTHWEST, INC., 1624 S.E. GRAND AVE., PORTLAND 15, ORE.

AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD



SAWDUST FROM ASPEN, shown here by Lynn Welch, partner in Welch Planing Mill, Midvale, Utah, is in demand as mulch.

Aspen Finds New Use In Utah Operation

Aspen, a major species in Utah but previously considered a weed tree, is being used in a complete utilization program by Welch Planing Mill in Midvale, Utah.

Three major products, panels, mulch and bedding material—mean that every log going into the mill is nearly completely used. What's left over will be used to heat dry kilns soon to be installed.

The Welch brothers . . . Tom, Lynn and Eldon . . . are making glued-up core stock for use in panels and doors. Also, they are edge gluing to secure wide boards which are striated to serve as paneling.

Sawdust from the mill gang rip saws is bagged for sale to nurserymen who prefer it to peat moss. Planer shavings are baled and sold as bedding material for poultry and livestock. It later becomes a fertilizer and humus for soil.

Such an operation in Utah is important because the state has 423 cubic feet of aspen and cottonwood, more than 21% of the state total forest growing stock.

●

Mill Chief Named

Dennis Denman, son of Don Denman, senior vice president of Crown Zellerbach Corp., San Francisco, Calif., is the manager of the modern sawmill recently completed at Duncan Bay, B.C., for Elk Falls Co. The mill recently attained full rated single shift production. Several of Denman's staff are from Canadian Western division, Crown Zellerbach Canada, at Fraser Mills—Ernie Lillos, superintendent; S. Pollard, filer; M. Wainraugh and K. Bohemier, planerman and crane operator respectively.

Barker operator Ed James is from Comox Logging Division.

LONGER LIFE FOR CONVEYOR CHAIN,
FEWER INTERRUPTIONS IN CONVEYOR OPERATION

No more bent links in your conveyor chain. *ESCO* Integral Tooth Sprockets deliver all driving force to the vertical link. Horizontal links serve merely to guide and retain the chain on the sprocket. Chain stays in pitch with more equal distribution of load. Result: Chain life is greatly increased.

Tooth design reduces friction between chain and sprocket tooth, and eliminates flight hang-ups and breakage due to insufficient clearance. *ESCO* Integral Tooth Sprockets are cast in special alloy steel and heat treated for maximum wear resistance and retention of tooth pitch. Sprocket steel is alloyed to "match" chain metal for maximum wear resistance of both sprocket and chain. Result: Fewer breakdowns and longer conveyor life.

ESCO Sprockets can be furnished with or without drums. See your *ESCO* representative for details. He can tell you where you can see *ESCO* Sprockets in operation in your area. Be sure to ask him for your free copy of the *ESCO* Woodmill Equipment Catalog.

ESCO®

ELECTRIC STEEL FOUNDRY COMPANY
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MFG. PLANTS AT PORTLAND, ORE. AND DANVILLE, ILL.
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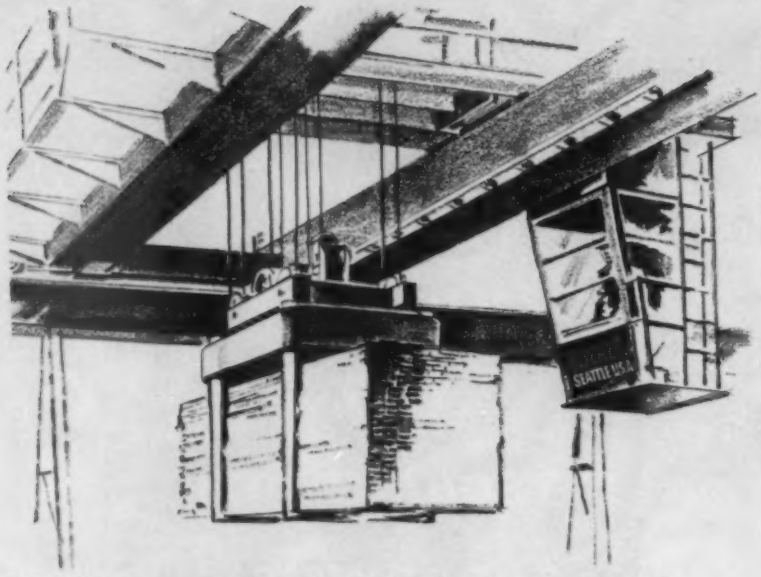


"Job-engineered" for unit load-handling

EDERER grapple cranes are the "job-engineered" answer to the specialized materials handling requirements of the forest products industries—where many types of unit loads must be moved. These cranes can be built to handle practically any type or size of unit load at whatever speed you require . . . stack as high as overhead clearances permit—and require only eight inches clearance between stacks.

Push-button controls operate the grapple. It will turn through a complete revolution in either direction, allowing freedom of handling and load spotting. Arms open and close hydraulically and adjustable pressure prevent any damage to loads.

A grapple crane can be "job-engineered" for your materials handling requirements. Why not send for our grapple crane Bulletin C-203?

Inquire about our complete line of light duty cranes from 3- to 20-ton capacity.

EDERER Cranes

346C58

EDERER ENGINEERING COMPANY
2933 FIRST AVENUE SOUTH • SEATTLE 4, WASHINGTON
EXPORT DIVISION: 301 Clay Street, San Francisco 11, California

Since 1901 — "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT

Cariboo Lumbermen Form Association

A new lumber manufacturers association recently held its first annual meeting at Williams Lake, B. C. It is the Cariboo-P.G.E. Lumber Manufacturers Association with headquarters at 608 Marine Bldg., Vancouver, B.C.

Membership comprises firms engaged in the manufacture of lumber and other forest products in the Kamloops and Prince George Forest Districts and who are also users or potential users of the Pacific Great Eastern Railway.

Officers and directors are Leslie Kerr, Lignum Ltd., president; Jack Ritson, H. J. Gardner & Sons Ltd., vice president; Tucker Battle, Blackwater Timber Co. Ltd.; Stan Bjornson, Brownmiller Bros. Lumber Co. Ltd.; Coes Brouwer, Netherlands Overseas Mills Ltd.; Chris Busch, Regal Lumber Co., Ltd.; Al Kilde, Western Plywood Co., Ltd.; Bill Mackin, Clinton Sawmills, Ltd.; and Don Patchett, A. L. Patchett & Sons Ltd.

Industry Meetings

OCTOBER

Forest Products Research Society, Upper Mississippi Valley Section, October 2-3, Eau Claire, Wis.
Forest Products Research Society, Mid-South section, October 12, Baton Rouge, La.
Southeastern Lumbermen's Club, October 13-14, DeSoto Hotel, Savannah, Ga.
Architectural Woodwork Institute, October 14-17, LaSalle Hotel, Chicago, Ill.
Forest Products Research Society, Northern California section, October 16, Red Bluff, Calif.
Insulation Board Institute, annual meeting, October 21-23, Seaview Club, Absecon, N. J.
American Forestry Association, October 27-30, Tucson, Arizona.
Forest Products Research Society, Pacific Northwest section, October 27-28, Vancouver, B. C.
Forest Products Research Society, Northeast section, October 30-31, Hotel Brunswick, Lancaster, Pa.

NOVEMBER

Forest Products Research Society, Midwest section, November 3-4, Holiday Inn, St. Louis, Mo.
Hardboard Association, annual meeting, November 5-6, Chicago, Ill.
Forest Products Research Society, Carolinas-Chesapeake section, November 6-7, Charlotte, N. C.
Pacific Logging Congress, November 10-12, Multnomah Hotel, Portland, Ore.
Governor's Safety Conference (Washington), November 13-14, Olympia, Wash.
Southern Sash & Door Jobbers Association, winter meeting, November 21 - 23, Americana Hotel, Miami Beach, Fla.

DECEMBER

Western Forestry and Conservation Association, December 10-12, Palace Hotel, San Francisco, Calif.

WTC Reorganizes Product Research Facilities

Extensive reorganization of research and new products activities has been achieved at Weyerhaeuser Timber Co.

The research facilities at Longview, Wash., have been realigned for more effective service to each produce line and group. Dr. A. S. Gregory is appointed manager of Central Research and Development and E. M. Williston manager of Wood Products Group development and service.

Formation of the Silvatek and New Products Group is announced, to be under direction of John L. Aram, vice-president, as general manager. Robert D. Pauley has been named to assist Aram. He will also serve as director of business development.

Aram says the research group has been reorganized to enable Weyerhaeuser to aggressively meet competition in fields where wood-derived products now hold large markets and to create new markets through effective application of organized research and development.

The new Silvatek and New Products group will be responsible for all manufacturing, merchandising and marketing of special products. This responsibility includes plans for the company's expansion into products, markets and industries where profitable growth can be achieved outside the traditional fields of lumber, plywood, pulp, paperboard and containers.

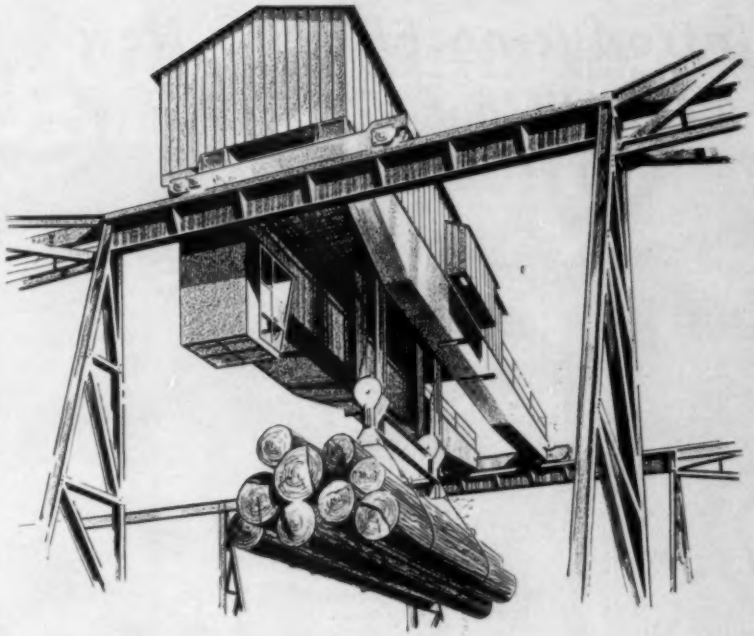
●

Hardwood Plywood Body Names New Director

Clark E. McDonald has been named managing director of the Hardwood Plywood Institute, succeeding Charles E. Close who retires after serving the institute since 1943 as secretary-treasurer and managing director. McDonald most recently served as vice-president and general manager of the Miami, Fla., division of the Logan Lumber Co. He was formerly secretary-manager of the Southern Sash & Door Jobbers. He has extensive background in the plywood, lumber, sash, door, window and furniture industries.

C. E. McDONALD

Close has been designated secretary emeritus for the institute and will be available as a consultant. He plans to open an office as an engineering consultant for the plywood and veneer industries.



Log-handling is cheaper by the load

This 60-foot span crane was "job-engineered" by EDERER for service at a paper mill. It moves logs from the pond or unloads from trucks or cars to the log deck . . . handles full loads at one lift — up to the crane's 50-ton capacity. This faster, smoother log-handling saves time and money.

The crane has double drum fixed hoist and spreader bar. The bridge moves from pond, over tracks and to log deck. Hoist and controls are completely housed for service in any kind of weather.

Inquire about our complete line of light duty cranes from 3- to 20-ton capacity.

EDERER "job-engineers" equipment for the forest products industries for many such specialized uses. Why not discuss YOUR special job requirements with an EDERER engineer?

EDERER Cranes

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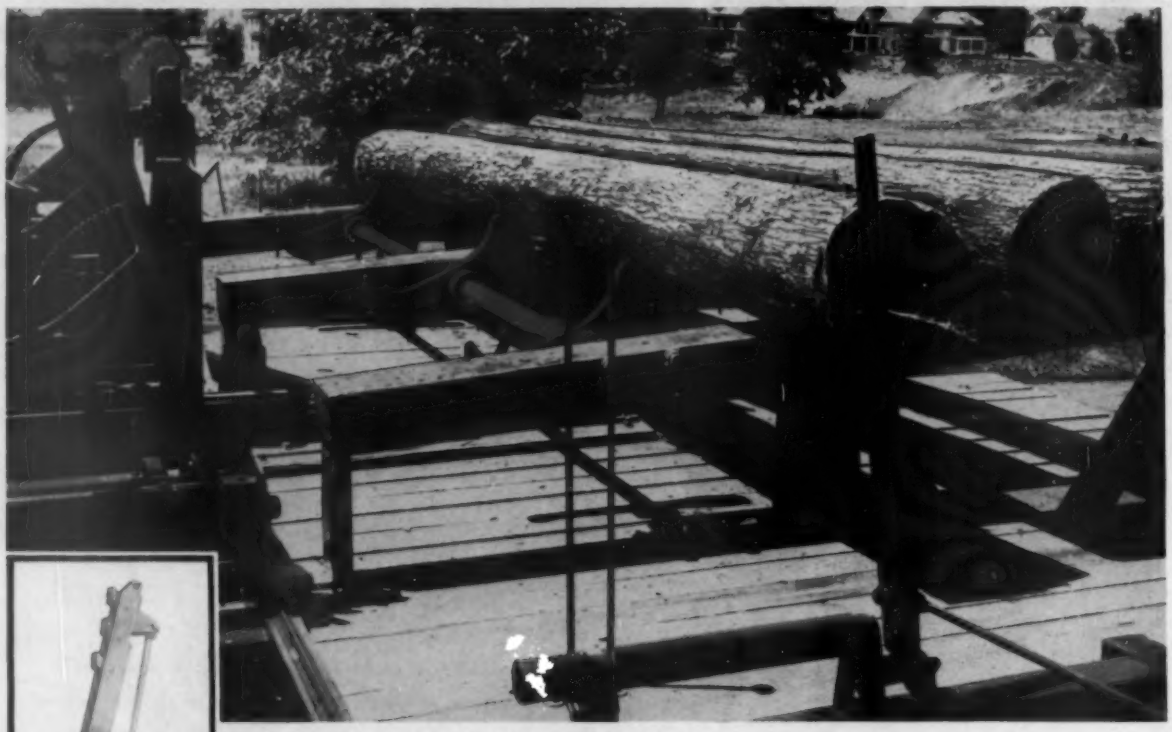
Since 190[illegible] — "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT

Introducing FRICK'S New
HYDRAULIC LOG TURNER & STOP-and-LOADER



Hydraulic Log Turner

Here is the best combination for increased production of top grade lumber . . . at a lower cost and with less labor. Designed for efficiency and dependability, this equipment is backed by a manufacturer with over 100 years experience in making sawmill machinery.

One of our factory representatives will be glad to inspect your mill and recommend the machinery that will enable you to make a greater profit with a minimum investment. There are 5 sizes in FRICK Sawmills. One to meet your exact requirements. The log turner is adaptable to all makes of mills large enough to utilize mechanical equipment.

Central reservoir and pump for hydraulic system.

Call or see

your nearest Frick man for information on . . .
SAWMILLS, BOSS and HAMMER DOGS,
SAW GUIDES, OVERHEAD SAWDUST DRAGS,
EDGERS, AIR OPERATED DOGS,
HYDRAULIC FEEDS, TRIMMERS, and other new sawmill equipment.

●

WRITE FOR THESE NEW CATALOGS TODAY:
Hydraulic Log Turner & Stop-Loader—Catalog No. 81
Frick Sawmills & Accessories—Catalog No. 75

FARM & SAWMILL MACHINERY SINCE 1853
Frick Co.
WAYNESBORO PENNSYLVANIA. U.S.A.

Link-Belt H class chains excel in sawmill applications

H class drag chain offers long life in tough refuse conveying

H class drag chain is available with all cast links or where greater strength is required as a combination chain with cast center links and heavy steel sidebar connecting links.

It is a popular refuse conveying chain because it can be turned over, thereby giving double service life.

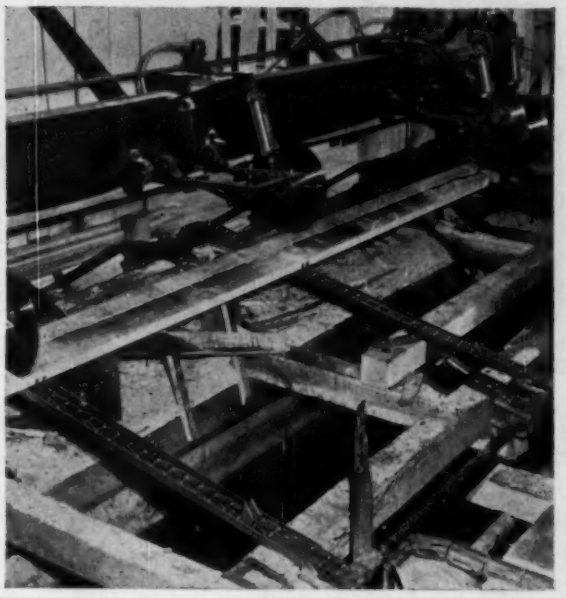
Sides and barrels of center links are cast integral to resist distortion. Rounded side of barrel offers proper sprocket contact, while the other forms a vertical pushing surface. Accurately machined pin holes in steel sidebars assures tight press fit—uniform pitch. A variety of attachments is available.

Broad bottom surfaces of H class pintle chain make it ideal for sliding conveyors

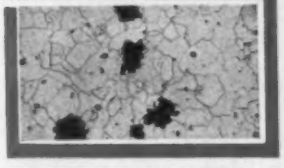
Sliding-type conveyors such as the installation shown below are excellent applications for H class chain.

The offset sidebar links are designed with substantial wearing shoes that provide ample surface for sliding wear.

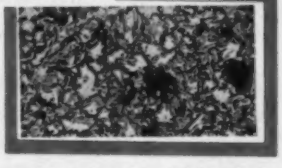
Links are made of malleable iron or Promal—the latter being used where extra strength is required or abrasive conditions exist. Pins are steel, riveted, and are locked against rotation in the sidebars by cast lugs. Cottered chain can be furnished. A wide range of attachments is available.



MALLEABLE



PROMAL



MICROPHOTOS show difference between ordinary malleable iron and Promal. Left—white areas in malleable microphoto represent "free iron" . . . black shows soft nodules of carbon. Right—dark areas in Promal structure show stronger, stiffer reinforcing material which strengthens metal; resists distortion, wear.

When to specify Promal chain in the lumber industry

Choose Link-Belt Promal chains for highly abrasive conditions (as with sandy bark)—for the extra strength and wear resistance demanded by heavy loads or more severe service. They last much longer . . . cost but little more.

The wide range of Link-Belt chains available in Promal includes all types of cast and combination chains.

Why H class roof top pintle chain is used so widely on transfer conveyors

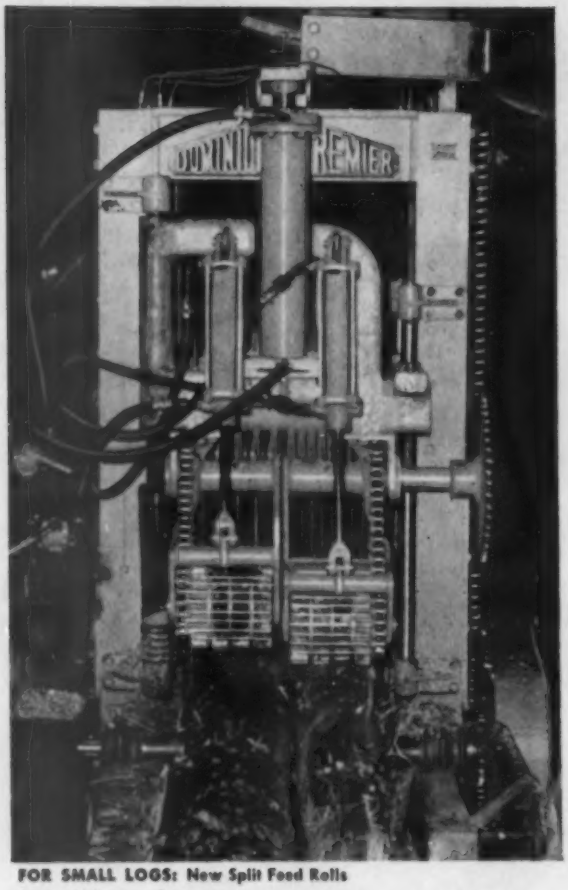
Link-Belt H-130 chain presents a sturdy moving ridge for use on transfer conveyors. Tops of the links are closed and have sloping surfaces which project above chain way. Thus, transverse loading and unloading of lumber is easily accomplished.

HEADQUARTERS for Link-Belt products is your nearby Link-Belt factory branch store or authorized stock-carrying distributor. Refer to the yellow pages of your local phone directory.

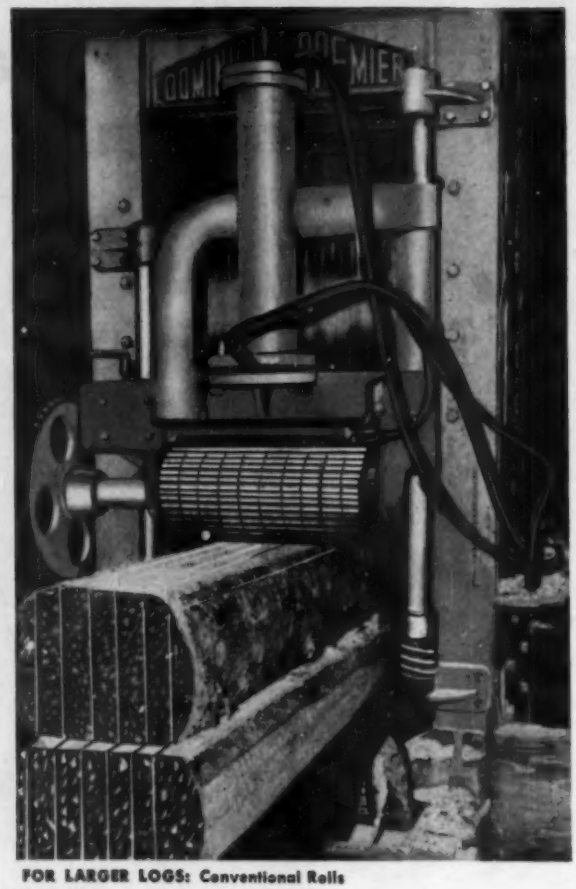
LINK-BELT

CHAINS AND SPROCKETS

LINK-BELT COMPANY: Plants, Sales Offices and Factory Branch Stores at San Francisco 24, Los Angeles 22 (Montebello), Seattle 4. Sales Offices and Factory Branch Stores at Portland 10, Spokane 10, Salt Lake City 1. Stock Carrying Distributors in Principal Areas. 14,754



FOR SMALL LOGS: New Split Feed Rolls for small Logs or Cants



FOR LARGER LOGS: Conventional Rolls for 25" Logs, Cants or Combination

Two Money Savers!

Increased production and lower costs in cutting all sizes of timber up to 25" in diameter are yours with *Dominion Premier Gangsaws.*

(1) Up to two logs (12" diameter or less) or four cants can be sawn at a time using the Dominion Premier Gangsaw with *split feed rolls.* Overhang of top feed rolls eliminates log bounce — even on eight foot logs. Existing machines easily converted in four hours.

(2) For large timber — 25" logs, cant or combination — specify a *standard model* Dominion Premier Gangsaw. Multiple saws cut up to 1¼" per stroke.

All Dominion Premier Gangsaws are made in Canada to withstand North American conditions. Greater production due to built-in oscillating feature. Simple design — no complicated adjustments. U.S. Standard dimensions throughout. All steel construction — no cast iron. Immediate service and parts.

Please Write for Catalogue No. AY-200.

DOMINION PREMIER GANGSAWS

Built and Serviced by

DOMINION BRIDGE COMPANY LIMITED

P. O. BOX 2160, VANCOUVER, B.C., CANADA – PHONE GLENBURN 1000

Representatives: Oregon, Northern California and Nevada, FRED E. BARNETT COMPANY; Idaho and Montana, FOREST PRODUCTS CO., Kalispell, Montana; Washington, MILL EQUIPMENT INC., Seattle, Wash.; Colorado, Arizona and New Mexico, ROBERT S. BADER, 142 Broadway, Denver 3, Colorado; Oregon, L & M EQUIPMENT COMPANY, Portland, Ore.

Change motors in minutes—

with FALK *all-steel* MOTOREDUCERS

No long and costly "down time" involved

Motors can be interchanged or replaced *in minutes* with the all-steel, All-Motor type FALK Motoreducer. No long and costly "down time" is involved in making the change!

Best of all, replacement is not limited to original make of motor—new NEMA frames may be substituted for old. This versatile Motoreducer operates with any make, speed or type of standard foot-mounted motor within its AGMA rating. No modification, no special shaft, no "partial" motor required.

In addition to unmatched motor interchangeability, this dependable gear drive—the "work horse of industry"—offers: widest choice of output-shaft position (horizontal, vertical, right-angle)...any output-shaft connection...any mounting, including wall and ceiling...standard speed range from 1.5 rpm to 1430 rpm. All these advantages, plus proved efficiency, low maintenance and extra-long life, make the All-Motor type FALK Motoreducer your best buy for any job requirement.

Furnished in sizes up to 75 hp with any make, style or type of motor; or, *without a motor if desired.* FALK Motoreducers are available from convenient factory, field or distributor stocks, from coast to coast.

Write for Bulletin 3100

THE FALK CORPORATION, MILWAUKEE, WISCONSIN

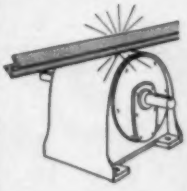
MANUFACTURERS OF:

- Motoreducers
- Speed Reducers
- Flexible Couplings
- Shaft Mounted Drives
- High Speed Drives
- Special Gear Drives
- Single Helical Gears
- Herringbone Gears
- Marine Drives
- Steel Castings
- Weldments
- Contract Machining

FALK

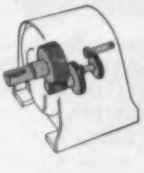
...a good name in industry

FALK "IN-BUILT" FACTORS assure full dependability—better service—longer life

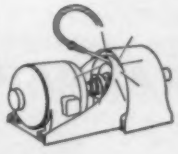


ALL-STEEL HOUSINGS
Rugged, strong, rigid ...all parts heavy steel plate, formed and welded in the Falk Weld Shop.

LARGE OVERHUNG LOAD CAPACITY
Large shafts, oversize bearings...rigid mountings with wide bearing spans to handle maximum loads.



PRECISION GEARING
Heat-treated alloy steel gearing, precision cut and shaved after heat treatment to eliminate distortion.



SEALED HOUSINGS
Splashproof, dustproof, oiltight. Dual closures and one-way vents keep oil in, dust and moisture out.

STANDARD ENGINEER'S FIELD REPORT

PRODUCT **Chevron Cylinder Oil**

FIRM **Walton Lumber Co.**
Everett, Washington

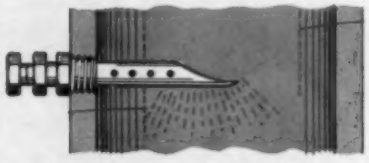
Steam engines work 31 years without repairs

Chevron Cylinder Oil has lubricated all steam powered equipment at Walton Lumber Company since 1927. In all this time, firm has never repaired or replaced any lubricated part. Chevron Cylinder Oil helps sawyer get instant response from engine powering main log carriage (above).

Hydrostatic lubricator feeds oil to main steam engine and smaller locomotive-type compressors in all parts of mill. Lubricator holds 16 gallons of Chevron Cylinder Oil.

Mill Superintendent John Clem (left) and Chief Engineer Frank Bulus (right) report Chevron Cylinder Oil gives excellent service in all their steam equipment including this 15-inch by 20-inch twin Sumner engine which powers main log carriage. They started using Chevron Cylinder Oil when mill was rebuilt and have continued using it for over 31 years.

How Chevron Cylinder Oils cut lubrication costs



- Lubricate economically and efficiently with freedom from carbon in temperatures from 375°F. to 550°F.
- Atomize readily in steam and separates easily from exhaust steam and condensate.
- Various grades to meet mechanical requirements of installations.

For More Information on this or other petroleum products contact your Standard Engineer or Representative, or write Standard Oil Company of California, 225 Bush St., San Francisco 20, California.

CHEVRON Industrial Lubricants

TRADEMARK "CHEVRON" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA

ECONOMIC OUTLOOK:

The Forest Industries in the State of Alaska

by B. FRANK HEINTZLEMAN

Former U. S. Regional Forester of Alaska and Former Governor of Alaska

The recent grant of statehood to Alaska has stimulated a widespread interest in everything Alaskan. Industrial concerns and investment houses are showing particular interest in natural resources which hold promise for early development with possible disposal of the products on American or foreign markets.

The government of the new state of Alaska can be expected to make a special effort to attract new industries as a means of increasing the present small population and the taxable wealth to help defray the higher costs of state and subordinate local governments, as compared with costs under Territorial status.

Pulp Industry An Important Asset

In this connection, the people of Alaska are fortunate in that one new large industry which had long been in the offing has recently been firmly established. This is the pulp industry. The first pulp mill started four years ago after 25 years of strenuous "selling" effort by local federal officials and public-spirited residents. Additional pulp mills are now building, or in prospect, along with such associated industries as sawmills, plywood plants and shingle mills. Service enterprises of many kinds are springing up to meet the needs of the manufacturing plants and logging camps.

First Efforts Were Discouraging

The first attempts to get the pulp and paper industry started in Alaska began in the late nineteen twenties, but came to an end before construction started due to the depression in the nineteen thirties.

Immediately after the close of World War II, Alaska again came into the limelight as a potential source of newsprint but, for various reasons, the projects were dropped before the construction stage was reached.

The promotional work among possible prospects continued without interruption until the late nineteen forties when the Puget Sound Pulp and Timber Co. and the American Viscose Company came into the picture and after intensive investigations formed the Ketchikan Pulp Company. This company established a large mill for dissolving pulp manufacture at Ketchikan at a cost of 55 million dollars. It began operations in 1954. The Ketchikan plant is Alaska's first pulp mill and the only one to date which has reached the operating stage.

Plans for More Plants Materialize

Shortly after 1950, Japanese interests which had been large factors in the world's rayon markets before World War II and had lost their sources of rayon quality pulp in Manchurio and Saghalin Island as a result of that war, sought new sources of pulp supply in North America. As a result of their interest, cutting rights on a large tract of National Forest timber near Sitka, Alaska were offered for public sale. The Japanese group was the only bidder. The sale was made to an American company organized for the purpose but backed with Japanese capital. The operation will be staffed by Americans and manned with American workers both in the woods and mill. The plant is now under construction at Sitka and completion is scheduled for the end of 1959. The estimated construction cost is 53 million dollars.

A third pulp operation is scheduled for the Juneau area. The project is presently in the surveying and planning stage. The timber cutting rights were awarded on bid to the Georgia-Pacific Company, a large plywood, lumber and pulp manufacturer of the Pacific Coast and the South. The product will be newsprint paper or sulphite pulp.

A new sawmill is scheduled for construction at the town of Wrangell, Alaska. The Northern Pacific Timber Company of Portland, Oregon proposes to erect a large sawmill here in 1959. The company plans, as outlined in its timber supply contract for National Forest timber, calls for the addition of a small sulphite pulp plant to the sawmill enterprise before the end of 1962.

"Panhandle" Area Attracts Attention

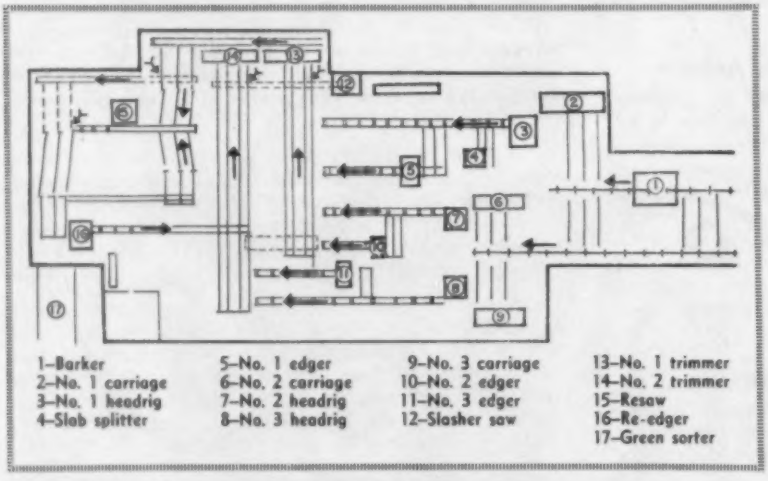
All of the plants mentioned above, along with some large and small sawmills which have been in long operation are located in Southeastern Alaska, "The Panhandle," which extends southeast along the west side of British Columbia for some 400 miles. Most of The Panhandle is included in the Tongass National Forest, which is administered by the United States Forest Service. The timber resource is managed under strict forest practice rules and for sustained yield of material. The commercial timber area in this region covers about 4,000,000 acres of the Western hemlock-Sitka spruce type of forest growth, the same type found along the coast of British Columbia, Washington and Oregon.

(Continued on page 64)

INTEGRATED FOREST PRODUCTS CENTER at Red Bluff, Calif. The units in this, the corporation's largest single facility, are: (1) main office; (2) log unloader and species sorter; (3) log lift and sawmill; (4) chippers and refuse collection; (5) power house; (6) fuel storage pile; (7) maintenance building; (8) fire engine garage; (9) green sorter building; (10) stacker and unstacker; (11) dry kilns; (12) cooling shed; (13) dry sorter and dry storage building, with planer building connecting this and (14) shipping building; (15) molded pulp plant (in operation) and (16) pulp plant (nearing completion). Log pond is 40 acres.

Increased Wood Utilization at Diamond Gardner's

integrated products center affords 15 million feet a year more fiber



1–Barker
2–No. 1 carriage
3–No. 1 headrig
4–Slab splitter
5–No. 1 edger
6–No. 2 carriage
7–No. 2 headrig
8–No. 3 headrig
9–No. 3 carriage
10–No. 2 edger
11–No. 3 edger
12–Slasher saw
13–No. 1 trimmer
14–No. 2 trimmer
15–Resaw
16–Re-edger
17–Green sorter

EQUIPMENT

EDERER cranes, 4 10-ton, 1 50-ton; NICHOLSON 60" barker; KLAMATH MACHINE & LOCOMOTIVE WORKS 9' bandmill; two Sumner 8' bandmills; SUMNER log lift and deck, two 8' bandmills, deck saw arbor, 7' vertical resaw, 11-saw trimmer, slasher saw; FILER & STOWELL carriages, 72", 48", 54", with Filer & Stowell remote controls; PRESCOTT IRON WORKS edgers, two 8"x48" with Prescott remote controls; PORTLAND IRON WORKS 11-saw trimmer; KLAMATH MACHINE & LOCOMOTIVE WORKS edgers, 8"x60", 8"x72"; IRVINGTON trimmers and end waxers and stampers, 2; STETSON-ROSS, two planers and one blanker; TURNER 54" resaw; KLAMATH IRON WORKS breakdown hoists; ARMSTRONG MFG. filing room equipment; GENERAL ELECTRIC motors with WESTERN GEAR gears; LAUCKS Sentry moisture detector; ANDERSON BLOW PIPE blower system; RENS metal detectors on chippers; WASHINGTON MACHINE live rolls; REES BLOW PIPE sinker boat pontoons; ACME steel strapping; SPEAR & JACKSON 108" deck saw; TIMBER STRUCTURES beams; WORTHINGTON air compressors; MONTGOMERY hog; ARMCO steel subsurface drainage and utility tunnels.

ADDITIONAL YIELD will be in chips and lumber from small logs and thinnings not economically harvestable in the past at Diamond Gardner's new Red Bluff, Calif. plant.

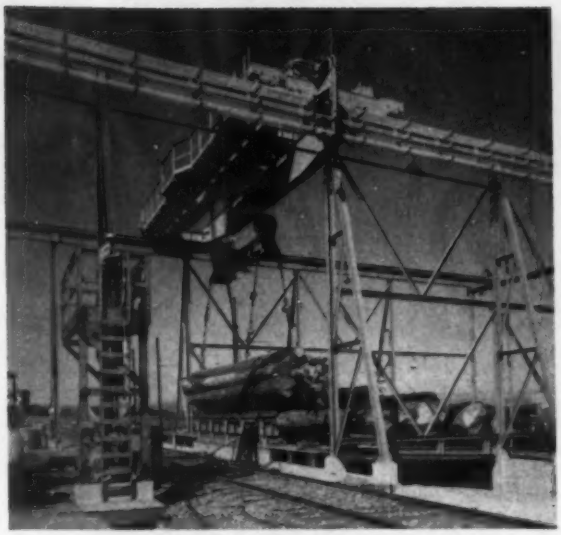
Logs from six to 72 inches now are processed. The sawmill is geared to an annual cut of 85 million feet on sustained yield from D-G's 220,000-acre tree farm.

THIS RESOURCE and the sawmill's design will make this the heart of the corporation's lumber production in coming years. Lumber today accounts for about 13% of D-G's products.

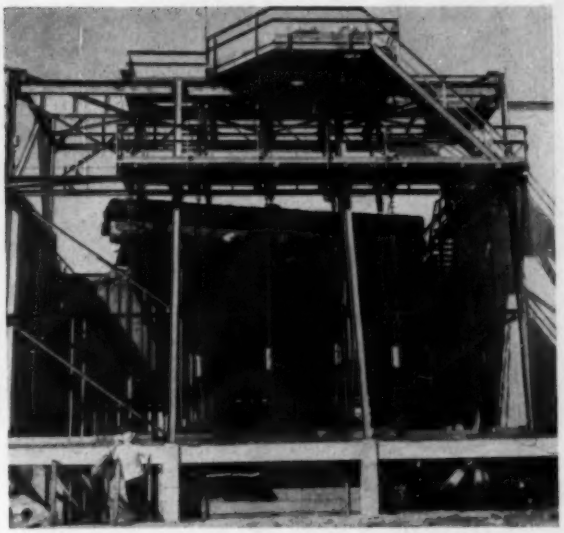
The Red Bluff mill produces lumber only. Moulding and specialty items are produced at Chico, Calif.

DESIGN for the sawmill was mainly by lumber division project engineer N. T. Shelton and W. Hegman, consultant. Design for the pulp plant was by Southwestern Engineering Co. Del E. Webb Construction Co. was the contractor. Palm Bridge and Iron Works did steel erection.

PERSONNEL at the IFPC are Earl J. Bechard, California division manager, Glen Dietz, sawmill superintendent, Jack Parrish, sales manager, Ruben Hendrix and Philip Brown sawmill foremen, A. L. Wolohen, head filer. Charles Arment, at Chico, is California division forester.

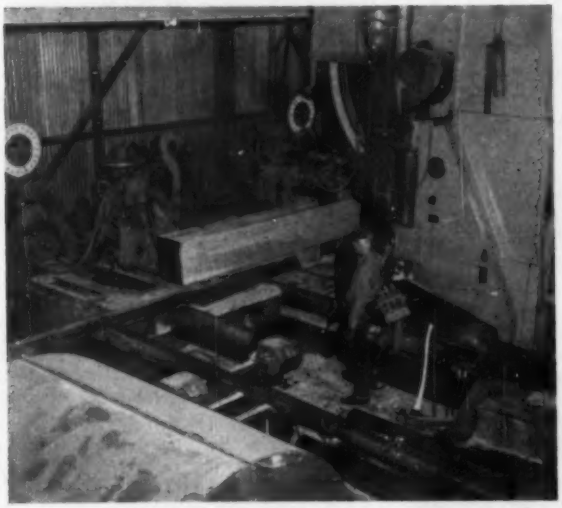


LOG UNLOADER AND SPECIES SORTER is unique. (See THE LUMBERMAN, Oct., 1957). This is main link between woods operations and smooth flow of logs by species through sawmill. Gondolas and trucks are unloaded side-by-side. Crane is a 50-ton unit. A log haul at end of 46′ breakdown deck moves logs onto 208′ conveyor, where operator uses air kickers to kick logs into species bays. Cable slings hold logs while a bundle of about 8M feet is accumulated. Completed bundle is strapped in two places. Cables are dropped, releasing bundle directly into pond.

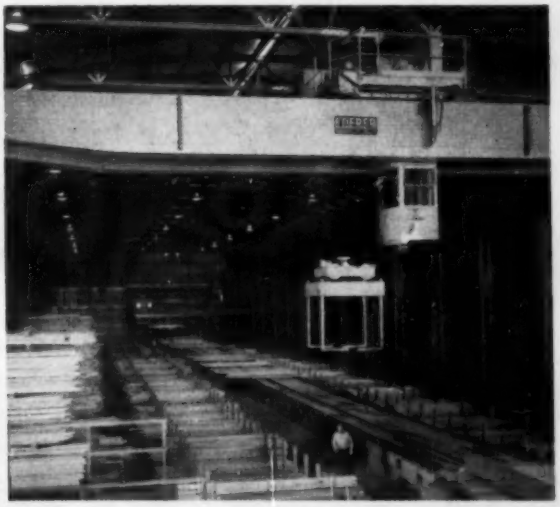


INCREASED EFFICIENCY AND SPACE SAVING were gained by installation of vertical log lift vs. inclined haul. Purpose: to lift whole bundles, since species are pre-sorted. Lift is 35′. Straps are broken in well. Bundle rolling is prevented by use of power on both sides of the five 50-ton Esco chains. Log lift-deck has three control stations: full panels at deck sawyer's post and on catwalk and partial panel in well. Voice control system is replacing former signal system. Well floor is scraped daily, using old dozer blade.

More on DIAMOND GARDNER Page 36



MANUFACTURING POLICIES call for the double-cutting headrigs to saw for grade and quality. No. 1 headrig takes the largest logs and No. 2 the smallest. No. 3 takes medium logs and any 20′ ones. About 15% of the logs run 18′ and 20′. The resaw is a production unit and seldom is used on the higher grades. Headrig tooth space is 2.25″; resaw spacing is 1.75″. An innovation is the fourth, or re-edger. This unit was not included in the original layout but was available. It was installed and has proved important. Goal in the mill is that no stock leaving the green sorter needs any further manufacturing. Such stock is held on the green sorter for proper re-run.



GREEN SORTER crane spots stock to be re-run directly at feed positions of resaw or re-edger. Re-edger is actually located under roof of green sorter. Graders are at two levels, both immediately below the re-edger, one receiving lumber from the trimmers and the other from the resaw. A total of 114 sorts is made: 16 for 6′ and 8′; 15 for 18′ and 20′; 41 for 10′ and 12′ and 42 for 14′ and 16′. Green stacks are delivered by 10-ton crane to an elevated, powered-roll transfer connecting the green sorter and the 550′x 230′ dry building. Paralleling this lumber transfer is another feature of the mill, a sticker storage chain which serves the automatic stacker.

TYPICAL DROPOUT shows skate roll arms spanning conveyor to automatic slasher saw in background.

REMOTE CONTROL for saw shifting on edger is example of numerous remote control applications.

SWINGING GATE serving dual chipper installation insured uninterrupted flow of refuse material.

SOME FEATURES in the sawmill include dropouts, cascading controls on conveyors, motor control centers and dual control systems.

More equipment in less space resulted from location of four lumber dropouts.

More rapid correction of stoppages and lessening of the chance of damage results from cascading controls on conveyors.

In addition to remote controls on the edgers, resaw set-outs are handled in the same manner.

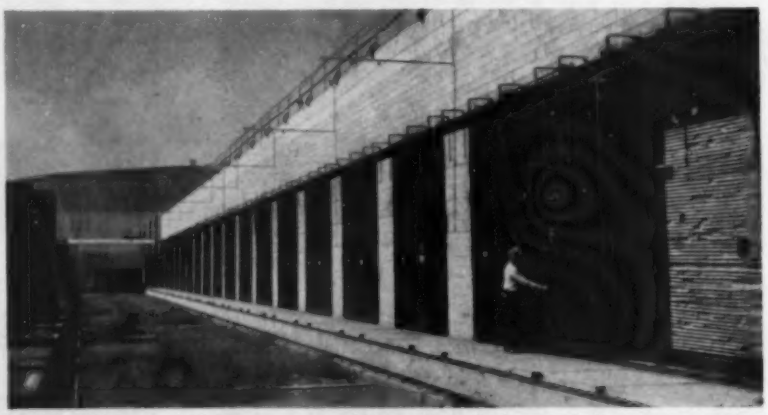
G.E. motor control centers, 27 in all in the IFPC, cut the time and maintenance problems inherent in scattered controls. The motor control centers are fitted with pull-out drawers for speedy maintenance.

Dual control systems are used.

THE MOORE KILNS are designed for operation at 100 psi. Some additional design elements are ceiling, end, and hinged floor baffles; individual pressure controls on each kiln; Moore Hi-Lo recording pressure controller in No. 2 unit; pre-wired control panels; 2-speed motors and 15 6-foot fans on line shaft in each unit.

Transfer car carries its own shed, eliminating need for shedding transferway. Car can add trailer and has rail lock for perfect rail alignment.

Both the stackers and unstackers were designed and manufactured by Moore Dry Kiln. The stackers are equipped with a Mason type sticker placer.



DRY KILN battery of 18 Moore cross circulating units is the largest of this type construction: 12" concrete block walls, kilns 124'x18', 5/16" Transite roof topped with 6" Zonolite aggregate.

CHIPPER BUILDING and Link Belt chip elevator housing. Chipper turns out groundwood pulp chips. Three tubes from building lead to loading, pulp mill and fuel storage.

ONE OF THE FIRST commercial applications of groundwood pulp from chips will be at Red Bluff. Research data on feasibility of process and forecast on chip return from kinds of logs on California tree farm were decisive in establishment of the IFPC.

Leaving Sumner 66" chippers, Link Belt elevator and Rotex screen, chips enter Rader Pneumatic conveyor on ground level. A double gate is here. One tube (not yet used) goes underground to pulp mill. The second goes on surface to another double gate where chips are continued to car loading site or diverted onto fuel pile.

Sporadic excesses of fuel occur now. This will halt when full chip production goes to pulp mill.

DIAMOND GARDNER'S WOOD UTILIZATION *(Continued)*

STEAM DEMANDS for sawmill, pulp plant, dry kilns and for unit heaters in all buildings are met by power house with three Riley steam generating units. Steam is exported at 300 psi. Burning bark and sawdust, per the IFPC whole-log utilization concept, the boilers are rated at 60,000 lbs. On natural gas, the rating is 80,000 lbs. Wood fuel is now used; all are convertible.

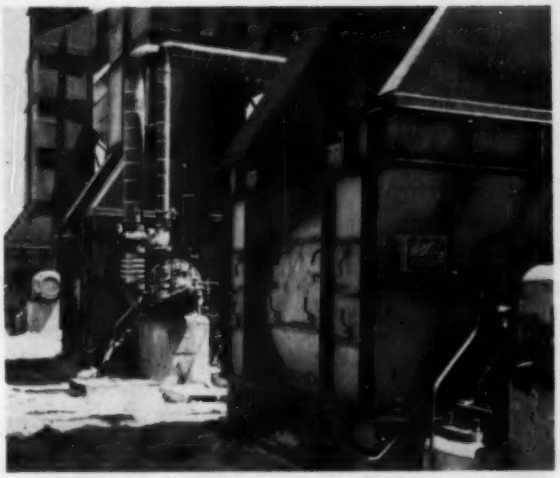
A chain conveyor full length of the power house accepts fuel from the mill. Excess fuel remaining after gravity feed of fireboxes passes onto belt conveyor and to fuel pile. A Cat D-8 dozes the fuel pile, spreading and also putting refuse at an infeed point when direct flow of residue from the mill falls below normal necessary for boilers.

Water comes from two deep wells on the D-G property. It is used at 3 to 5 parts per million hardness. Electric power is commercially purchased.

The main gas entry to the power house is equipped with solenoid which prevents valve opening unless both fans to burners are operating. Fan failure shuts off gas flow.

Hans Arftsen is power engineer.

EQUIPMENT: Fisher valves; 3 Permutit (ion exchangers); Ingersoll Rand water pumps; Hayes controls; Sarraco Boiler storage tanks; Reeves speed reducers; Milton Roy pumps; Worthington compressor.



CINDERS are reintroduced and fuel burned in suspension. Draft fans are Buffalo. Two G. E. motors and a Carling steam turbine, all 50 hp.

MAINTENANCE for all IFPC is centered in fully-equipped machine shop. Lumber and pulp divisions have separate maintenance crews. Machine shop handles all major work. Office for director of fire and plant protection is provided here.

NEW PROCEDURE to reduce downtime and achieve better equipment protection and crew utilization was devised by lumber division engineers. Heart of the planned maintenance program: complete records and strict inspection and lubrication schedules. Names, locations and specifications on all equipment were put on cards at outset. Full-time clerk maintains the records.

FORMS: Pump, Motor, and Equipment Record cards; Inspector's Removable record; Maintenance & Repair record; Maintenance Work request; Machine Shop work request.

File signal tells clerk inspection is due. Removable card is sent to maintenance foreman. He schedules mechanics' inspections. Small matters are corrected on the spot. Others are noted on card. Foreman notes cards, initiates work requests, orders materials, schedules repairs to coincide with production.

Whenever possible, regular lubrications and scheduled inspections are timed simultaneously.

EQUIPMENT in the machine shop includes: Hanchett knife grinder; Greenerd arbor press; South Bend lathe; Cincinnati saw grinder; Rockford shaper; Mitts & Merrill key seater; Van Norman milling machine; Lincoln welder; American lathes; Rodgers shop Press; Do-All surface grinder.

Additional pictures on page 38

LUMBER PROMOTION is given a good boost by appearance of main office building. It is more than an administrative headquarters. Offices are paneled in a variety of styles, showing wood to advantage.

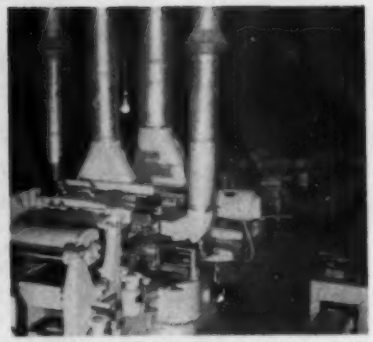
Exterior, board and batten, shows effective use of wood for home or light construction. Building has shake roof.

A major component of this building is the complete electronic data processing unit installed. D-G has made fullest use of the Remington Rand Univac for office procedures. Inventory and production control will now come under EDP.

DIAMOND GARDNER'S WOOD UTILIZATION *(Continued)*

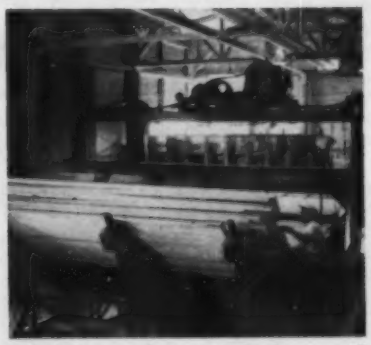
DIAMOND GARDNER PLANT has many other special features, some of which are illustrated here. Entire plant makes up a utilization unit for fullest recovery of quality lumber and other forest products.

DECK SAW, bucking logs to length as they enter the mill is Spear & Jackson.



PLANERS are Stetson-Ross 6-12C-1 units. Two planers are used in finishing plant.

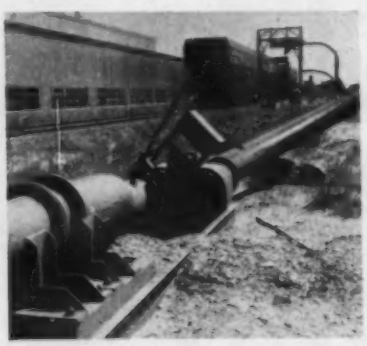
RESAW is a 7' Sumner vertical unit. Operator at remote control station.



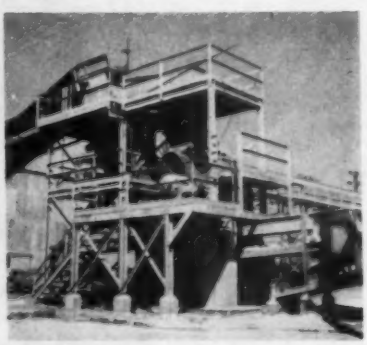
STACKER, unstacker and sticker layer are all designed by Moore Dry Kiln.

TRIMMER is an Irvington unit. Behind trimmer is Irvington waxer and printer.

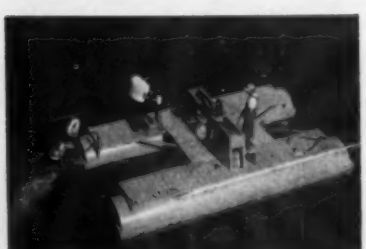
METAL DETECTOR in chipper building is a Rens Mfg. Unit. Two are used.



TWO-WAY GATE in Rader chipper blower; One to car and other to outside stacking.



DIAMOND HOG takes bark from mill. Lower, right is conveyor to power house.



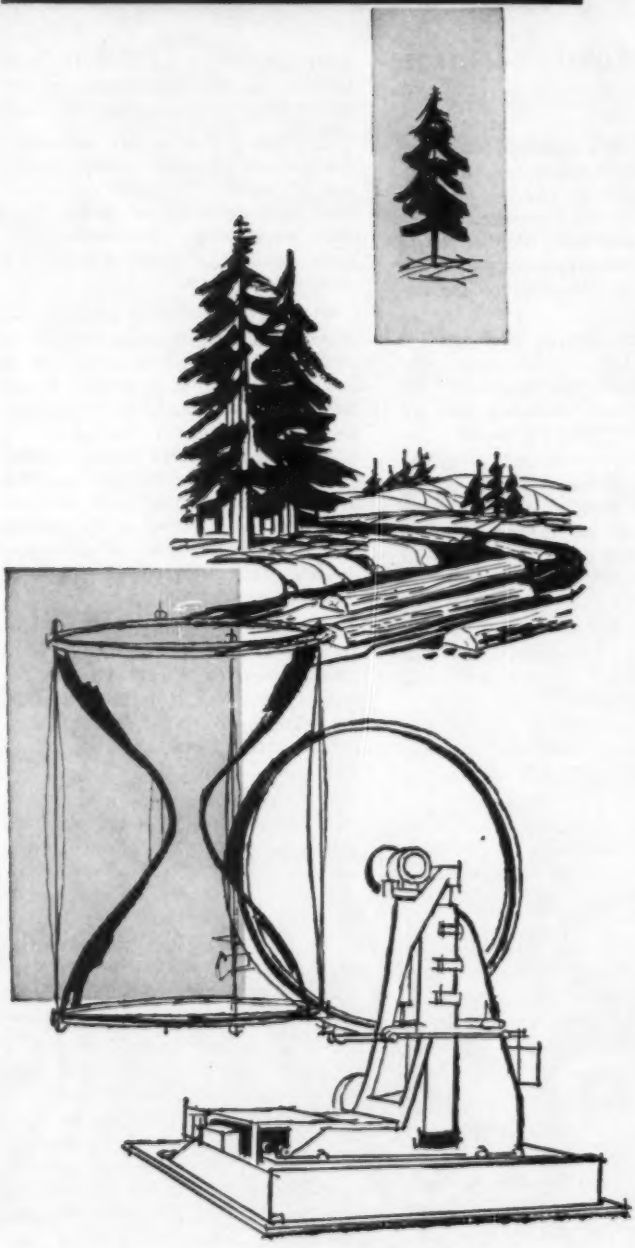
POND SINKER BOAT uses 45"x20' Rees pontoons, Johnson 10-hp Sea Horse motor.

NO. 2 AND 3 bandmills are Sumner 8', with Filer & Stowell 54" carriages.

[END]

FILER & STOWELL

BAND MILLS



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They Guarantee Their Lumber

through a 12-point quality control program

PROBLEMS OF QUALITY CONTROL are discussed by general production manager, Joe C. Denman, seated, and quality control man Paul Burnley. No detail is too small for the attention of these men who are responsible for maintaining quality of the company's lumber.

OVERALL QUALITY CONTROL from woods to finishing, have enabled Southern Pine Lumber Co., Diboll, Texas, to guarantee their pine lumber against twisting or crooking. In two years they have had returned to them only 7000 feet, and a portion of this was to "test" their guarantee.

Every piece of lumber produced is trademarked in the finishing department of the planing mill and carries the Southern Pine Inspection Bureau stamp for grade.

The guarantee is building for them a solid acceptance of dependability of product, according to president Arthur Temple, and it is one phase of the business upon which a continuing degree of emphasis is placed.

The program is possible because of the pinpointing of responsibility. Quality control man Paul Burnley is directly responsible to general production superintendent Joe C. Denman, with quality authority over every department of manufacture. Burnley can accept or reject lumber at any point in production. He works closely with all superintendents and foremen.

ORGANIZATIONAL SETUP. Under Mr. Denman are five superintendents and eight foremen. Here is the line of responsibility:

Production Superintendent (Joe C. Denman)
- A. Paul Burnley in charge of quality for all departments
  1. Power Superintendent
  2. Sawmill Superintendent
     - a. Night Foreman
     - b. Barker Foreman
     - c. Chipper Foreman
     - d. Lathe Foreman
  3. Sorting and Stacking Superintendent
  4. Treating Superintendent
  5. Shipping Superintendent
     - a. Dry Kiln Foreman
     - b. Shed Foreman
     - c. Send-in Foreman
     - d. Shipping Foreman

POINTS OF QUALITY CONTROL: There are 12 key points in the quality control program:

1. Control of quality starts with the foresters. Selective logging and marking of all trees for end use previous to cutting. Timber is marked by the foresters to determine whether it will be sawlogs, piling, poles or pulp. Also select areas for logging to improve stands.

2. The deck sawyer takes up the control after logs are delivered to the mill. He decides the lengths to cut and exactly where each log will go, determining the final log grade.

3. The sawyer in the mill is the key man in determining the grade cut of each log. He cuts for grade, turning the log. It is his responsibility to make the initial breakdown to avoid all possible cupping and twisting.

4. The edgerman carries his responsibility in the quality program by getting the best possible cuts from each board that goes to him, and edging to avoid cupping.

5. The trimmerman is another key point. He has to know how to do the critical trimming job for best quality recovery.

6. The resaw on the green chain is a vertical unit, used to cut back dimension into 1-inch stock for upgrading. The resaw receives only 2-inch dimension stock.

All dimension over two inches is inspected by quality control man Paul Burnley. All compression and heart on one side, is pulled from the line for the resaw and quality improvement.

7. Proper stacking is considered one of the most critical points. All lumber is stacked so that stickers extends out one inch beyond the lumber. Stickers are laid carefully, one directly above the other. This prevents the boards from twisting and gives full length packages for each kiln car, for the eight double and two single Moore cross circulating kilns.

8. The dry kilns are considered the heart of the entire quality production of lumber. Careful drying schedules through years of testing have been worked out. Nonetheless constant sampling during the drying process is practiced.

9. The cooling shed is an important stage. It is here that the moisture is equalized and where twisting is apt to occur if it is going to do so. As the lumber is unstacked, it is inspected piece by piece by two graders and all undesirable stock with crook is pulled. Straight line dimension and one inch are resawn or trimmed in the remanufacturing plant. However, the lumber must again pass inspection for further grading and returned to resaw if necessary.

10. The rough storage plant is operated on schedule. The practice is to hold lumber for at least 16 days for proper equalizing. If defect is to show up at all, it will be pulled for further remanufacturing or be assigned to other products manufacture.

11. The planing mill is the eleventh check point. Lumber goes directly from the planing mill to the dress storage shed. They prefer not to load out directly from planer mill. Here again they give the lumber plenty of chance to stabilize and another opportunity to catch any defect before lumber is loaded out.

12. Loading out is the final check point. Here any undesirable pieces are pulled out at the time the lumber is being loaded for shipment.

By concentrated attention to these 12 check points, training of the men and constant supervision by quality control man Paul Burnley, Southern Pine Lumber Co., is able to issue an unqualified quarantee against the crooking of their lumber. [END]

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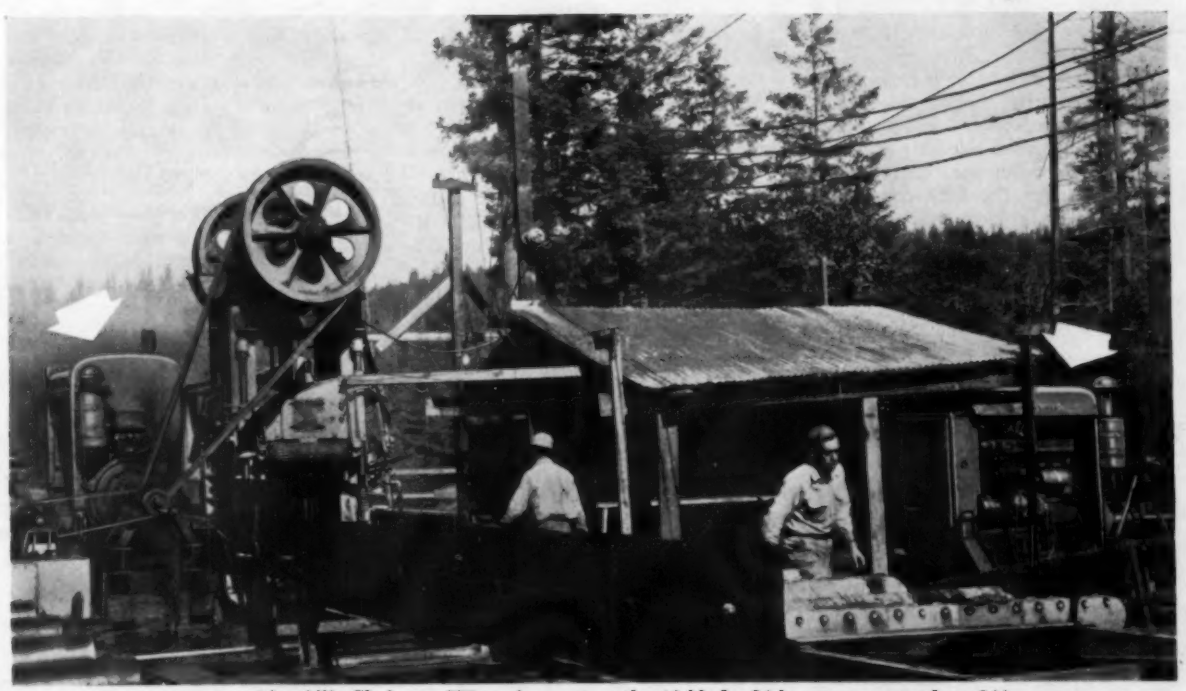
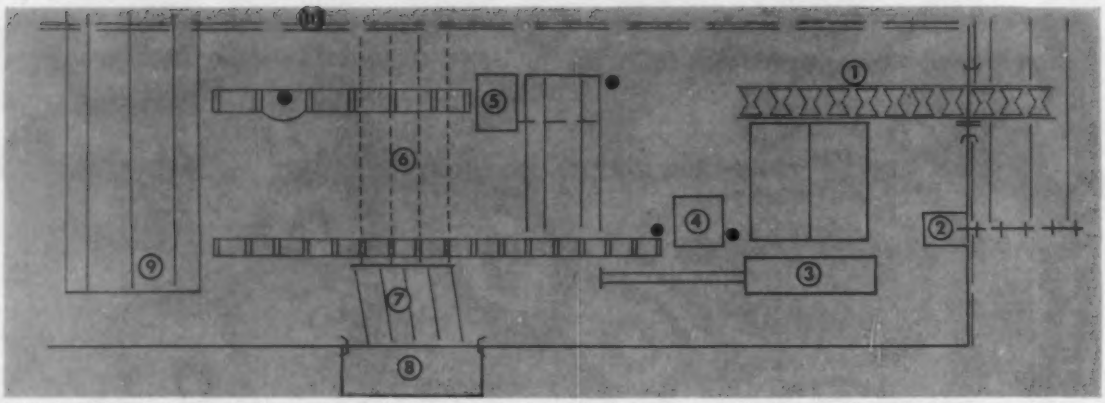
ALLIS-CHALMERS



An Allis-Chalmers 779 engine powers the 10-blade, 24-in. gang saw and an 844 drives the 6-in. by 60-in. edger for the Big River Lumber Co., Ukiah, California. BC-178



MILL LAYOUT: 1. Corset rolls from barker; 2. Upright motor for log haul; 3. Carriage; 4. Headrig; 5. Edger; 6. Transfer to slasher; 7. Inclined transfer for dunnage; 8 Exterior platform for bundles of dunnage; 9. Transfer table to trimmer; 10. Former exterior wall.

Impact of Chip Economy led to doubling of sawmill production at one-quarter of the original investment.

THREE FACTORS influenced the decision to put in a second side at the Anderson, Calif., sawmill of the U. S. Plywood Corp.:

- Log pond, log dump, log haul, green chain, air and steam all were sufficient to support a second side.
- All chips could be used and, in fact, were needed at the company's Novoply plant—and utilization of residual logs from full operation of the plywood plant could be realized.
- Production could be approximately doubled, at one-quarter of the original investment.

Lumber division manager A. E. Macartney attests the validity of these factors and reports the smooth operation of the second side. He also cites the importance of the chip economy in sawmilling. The USP complex at Anderson is a large one and Mr. Macartney says "Location of this sized plant on the flat is a result of the chip impact—you can afford to haul a log farther to process it, if you can sell the residual material."

THE SECOND SIDE is housed in an extension of the original structure. the new area measures 36'x144'. A bulkhead which formerly marked the end of the corset rolls offbearing from the barker was opened up and additional corset rolls added. A plastic clutch, with chain linkage allows these two sections of rolls to be operated separately or together.

The original trimmer is used. None was added to the second side. Four men are on the floor on the second side; sawyer, tail sawyer, edgerman and edger picker. The fifth man added is a trim saw spotter.

Production now is 140M feet a shift. Two shifts are operating. No new sorts were added to the green chain and so production per thousand per man has climbed.

The trimmerman formerly spotted his own lumber. However, there was a slasher saw tender nearby. He now spots for the trimmerman and also is available to step over and clear up any tie-ups at the slasher. The trimmerman utilizes a tripper system developed by Portland Iron Works, selecting his saws if trimming for grade and allowing automatic trim for length.

The stub edger modified by Portland Iron Works with eastern table Mr. Macartney says allows Douglas fir region stub edger results by the type edgerman found in the inland area.

TWO OPERATIONS in reality exist: the production of Douglas fir on the night shift and pine on the day. White fir is used as a swing species as balance demands.

The resaw is used when Douglas fir is cut. It is not used in pine production because the mill seeks to make a grade break in thickness, cutting #2 common 4/4 and 3# and worse 6/4. Different edger and headsaws are used on the pine. The normal cut is 40% each pine and Douglas fir and 20% white fir.

BEHIND THE DECISION to add the second side lies a production story somewhat different from that of most sawmills. Remanufacturing facilities were installed and used at Anderson even prior to establishment of the first sawmill on the site. Utilization figured into the entire operation.

The initial plant at Anderson was a Harbor Plywood operation, established in 1948. U. S. Plywood Corp. entered the picture with later acquisition of this plant.

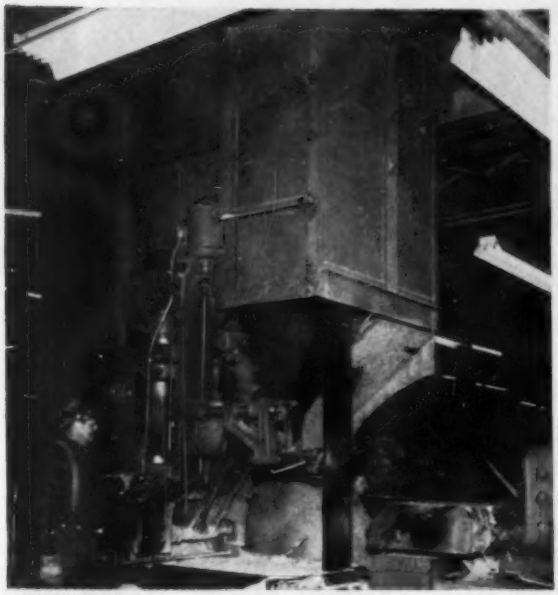
By 1952 the plywood plant was turning out 50 million feet of ⅜ stock a year and disposal of residual saw logs was a problem. Custom sawing was done. Sawlogs were sold. Some were swapped for peelers. Finally, a small sawmill some 40 miles from Anderson was acquired, to utilize residual logs.

The Novoply particle board plant was built in 1951, utilizing veneer waste. Later acquisitions included two sawmills and a box factory. Then a lumber shipping shed was built and, following this, installation of a planer, resaw, green chain and dry kilns. Meanwhile Novoply demands for chips increased tremendously.

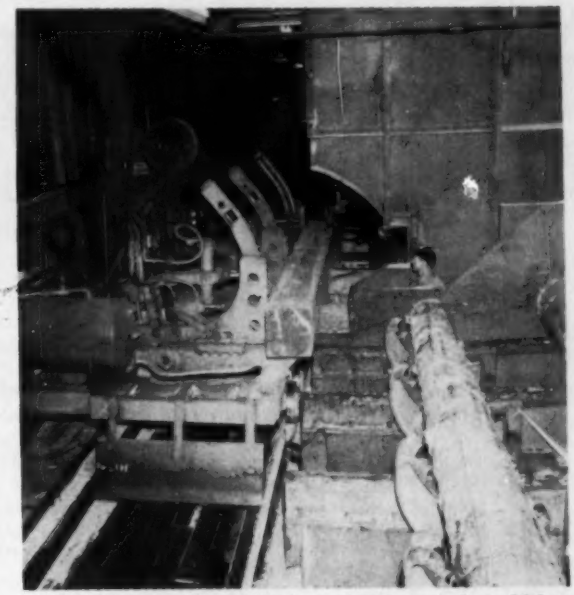
INTEGRATION meant consolidation and the management decided to erect the first sawmill on the Anderson site. There still was considerable shuttling of lumber and, also, the Novoply plant was buying outside dunnage for raw material to chip.

A re-appraisal of the facilities on hand and the needs resulted in the decision to add the second side.

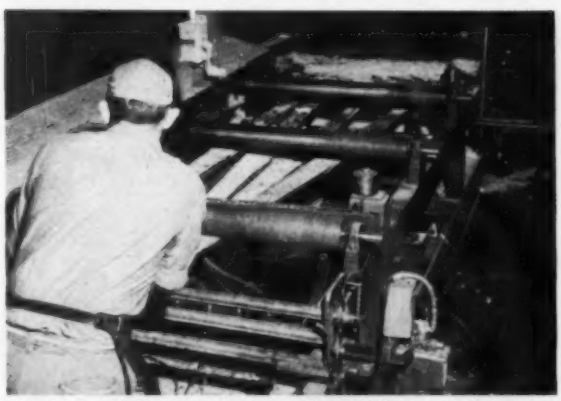
After a brief period of operating the two sides, the decision was made to actually operate two types of mills at the same location. This resulted in the present practice of cutting pine on the day shift and Douglas fir at night, using different saws and tooth spacing. Both the original mill and the new addition were designed by Klamath Machinery Co., who also supplied the carriages, feed works, deck machinery, roll cases, transfers, conveyors and other equipment.



NEW HEADRIG is an 8-foot Klamath Machine & Locomotive Works unit with 200-hp GE motor. The mill uses two tooth spaces: for Douglas fir, 12 gauge and 2½ inches; pine, 13 gauge and 2¼ inches.



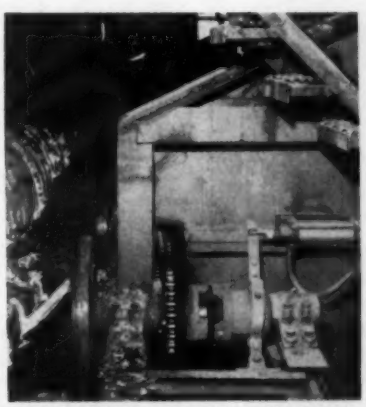
NEW CARRIAGE, a Klamath Machinery Company unit, has a 16-foot, 12-inch steam gun drive. This 3-block unit has a 48-inch opening and is equipped with Klamath M&L Works remote setworks.



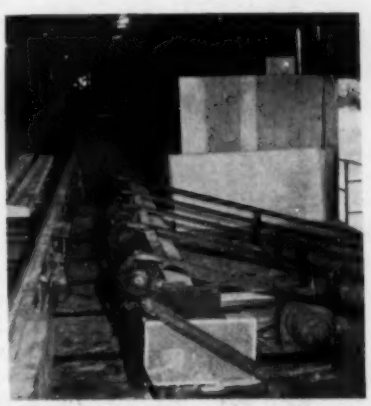
MODIFIED EDGER has eastern type table. The 8x48-inch stub edger is equipped with four saws and was completely rebuilt by the Portland Iron Works to achieve present lever set.

SAWYER'S STATION CLOSEUP shows 1. taper levers; 2. left hand control for blow valve, dogging, oscillating; 3. setting for 10 sets; 4. right hand control for forward, set, reverse.

ADDITIONAL SPACE needed for the new log deck was gained by shifting the motor powering the mill log haul from its floor spot to this upright position.



CONNECTION between original rolls from the barker and the added rolls. This lies behind the motor at left. Bulkhead marks end of original rolls.



EDGINGS, DUNNAGE from remanufacturing edger below are fed onto transfer chain by lift truck outside. They drop onto slasher saw transfer.

Good Planing Practices in Engelmann spruce

and Lodgepole pine require attention to moisture, knife cuts and depth of cut

By E. M. DAVIS

Technologist, Forest Products Laboratory, U. S. Forest Service

GOOD PLANING work requires three things: an adequate machine, competent operation, and lumber in satisfactory condition. When any one of the three is missing, the work is bound to suffer. Standards of planing quality naturally differ somewhat according to the grade of lumber and the prospective use, but a good smooth job of planing makes a better-looking, more salable product, even in common boards and dimension.

THE SPRUCES are probably the most difficult of our common softwoods to plane smoothly. The biggest single problem seems to be fuzzy grain. This is particularly troublesome if the moisture content of the wood is higher than desirable, or if the knives are a bit dull.

The following comments are based in part on tests made with clear Engelmann spruce at the Forest Products Laboratory a few years ago and in part on recent observations at seven sawmills in Idaho, Wyoming, and Colorado.

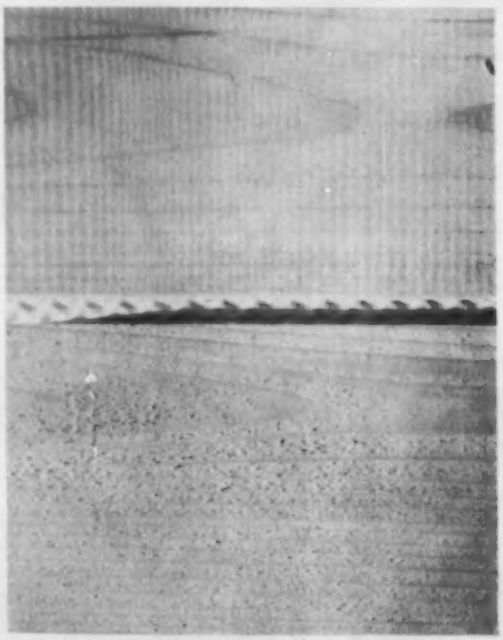
As far as moisture content of the lumber is concerned, very good results were observed at mills that planed material with moisture content of 12 to 15%. Earlier tests at the Laboratory had shown that 20% moisture content was definitely too high for good results and much inferior to 6% material in planing properties.

KNIFE CUTTING angles of 10, 20, 30, and 40 degrees showed the 30-degree angle to be best at low moisture contents, while the 20-degree angle worked best at 20% moisture content, determined by Forest Products Laboratory tests. Very good results were observed at sawmills that used cutting angles of 27 to 30 degrees with lumber in the 12 to 15% range.

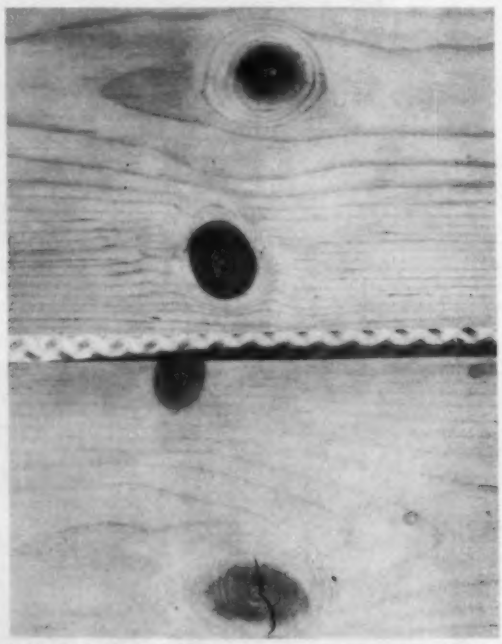
Knives with grinding bevels of 40 degrees are quite common but, for reducing raised grain and fuzzy grain, thinner edges are preferable. The best results were noted at mills that used a 30-degree grinding bevel on knives.

NUMBER OF KNIFE CUTS per inch is one of the most important factors. This can be checked visually, and can be varied in a machine by changing the speed of the cutterhead or the rate of feed. Laboratory tests showed four times as many defect-free samples with 20 knife marks per inch as with 6 knife marks. Observations at the sawmills indicate that 14 to 16 knife marks per inch are enough to yield very good results. On the other hand, 8 knife marks per inch under

(Continued on page 46)



ENGELMANN SPRUCE. Effects of moisture content on quality of planing is shown here. The upper sample, which was planed at 12% moisture content, showed no fuzzy grain. The lower one, from the same board, was planed at 25% moisture content. A range of from 12% to 15% appears to result in good output.



LODGEPOLE PINE. Effect of moisture content on checking of knots is shown. The upper sample, planed at 16% moisture content, shows beginning of hairline checks. Lower sample, planed at 6%, has open checks. The only chipped grain that was found occurred at 6% moisture content, and only 6% of these samples were affected at all.

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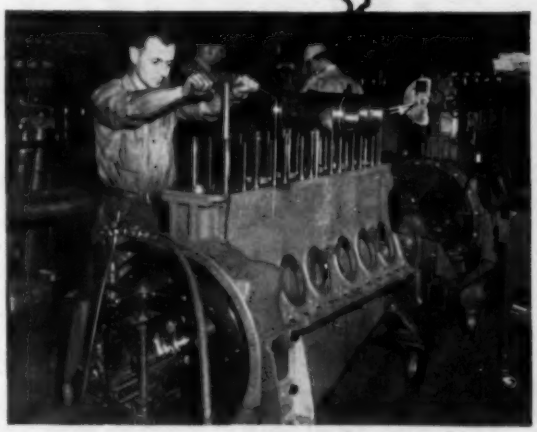

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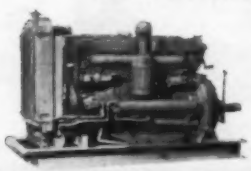

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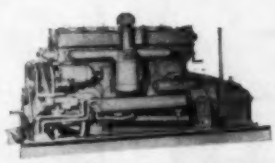

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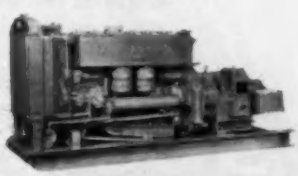

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Percent of samples showing fuzzy grain when planed at different moisture contents

Moisture content	Degree of fuzzy grain			
Percent	None Percent	Slight Percent	Medium Percent	Advanced Percent
Green	0	9	58	33
16	79	21	0	0
6	100	0	0	0

Every one of the green Lodgepole pine samples developed some fuzzy grain, especially around knots. Nine times out of 10 times the occurrences were either medium or advanced in degree. Only 21% of the samples planed at 16% moisture content had any fuzzy grain, and this was all slight in degree. No fuzzy grain was found in the material with a moisture content of 6%.

Percent of samples showing checked knots when planed at different moisture contents

Moisture content	Degree of checked knots			
Percent	None Percent	Slight Percent	Medium Percent	Advanced Percent
Green	100	0	0	0
16	83	17	0	0
6	27	49	18	[1]6

[1]—Broken knots.

The green Lodgepole pine samples planed without revealing any checked knots whatever. At 16% moisture content, hairline checks were found in 17% of the samples. At 6% moisture content, only 27% of samples were entirely free from checked knots. Open checks were found in 18% of the samples and broken knots in 6%. Checks were more pronounced in large knots.

fairly comparable conditions gave only fair results. The upper sample in figure 1 is of this type.

DEPTH OF CUT also has some influence on planing quality. In a series of cuts 1/32, 2/32, 3/32 and 4/32 inch deep, the 1/32-inch cut gave the best results, and the 2/32-inch cut was next. The two deeper cuts were about on a par but definitely poorer.

All in all, the best planing was observed at plants operating under the following conditions:

- Feed rate, 260 to 350 feet per minute
- Number of knives in cutterhead, 10 to 14
- Number of knife cuts per inch, 14 to 16
- Grinding bevel of knives, 30 degrees
- Cutting angle of knives, 27 to 30 degrees
- Moisture content of lumber, 12 to 15%

This does not mean that smaller planers with slower feed rates and fewer knives in the cutterhead cannot do a good job, but they simply are not designed or powered to turn out an equal volume of good work. In the quest for maximum volume, quality is sometimes neglected. From old and badly worn machines, little can be expected by way of either quality or quantity. One planer that was still in operation in one mill was made by a company that went out of business 42 years ago. Perfectly good wood often gets blamed for flaws that should be rightly attributed to poor equipment or faulty operation.

Ponderosa pine is one of the best softwoods to machine. Lodgepole pine closely resembles it in structure. In specific gravity they are almost identical; the value for lodgepole is 0.43 and for ponderosa it is 0.42, based on ovendry weight and ovendry volume. The two woods are similar in machining properties of the clear wood.

LODGEPOLE PINE lumber consists almost wholly of common grades, which are chiefly characterized by numerous knots of small to medium size that are generally sound. If this species is to be put to any use more exacting than for sheathing, framing, or containers, the problem of how to plane knotty lumber smoothly must be solved. Knotty finish and rustic furniture are perhaps the most promising possibilities. The plants that are better equipped and have more experienced machine operators no doubt have the problem solved already. But much of the lodgepole pine lumber is planed at small plants where there is limited experience and inferior equipment. This investigation is aimed at developing information on the important factors of moisture content.

Lodgepole pine was planed at three moisture contents: green (average 29%), 16%, and 6%. All other machining conditions were constant; that is, cutterhead speed was 3,600 revolutions per minute, feed rate was 36 feet per minute, the cutting angle was 30 degrees, and cuts were made 1/16 inch deep. All cuts were made on the same machine, a 30-inch cabinet planer with freshly sharpened knives.

The conclusion is that, for quality planing in common grade lodgepole pine, the best moisture content would be between 16% and 6%—probably closer to 16%. [END]

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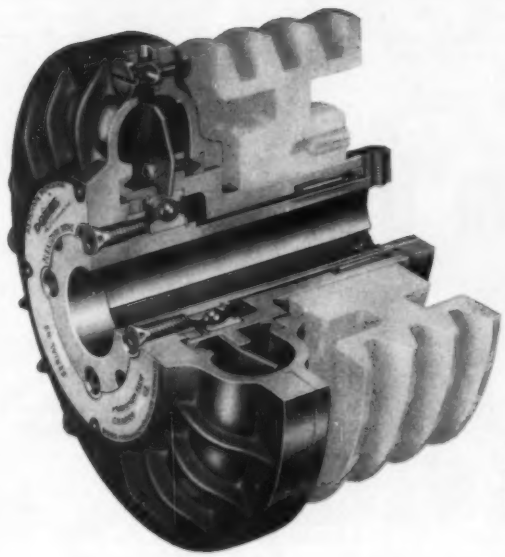
- ☑ Clutch trouble?
- ☑ Breakage of transmission parts due to instantaneous shock loads?
- ☑ Damage and recurring down-time from overloads?



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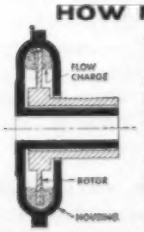
HOW FLEXIDYNE WORKS



The "dry fluid" in Flexidyne is tiny heat-treated steel shot. A measured amount, called the "flow charge," is contained in the housing, which is keyed to the motor shaft. Inside the housing is a rotor, free to revolve relative to the housing, but connected to the load.

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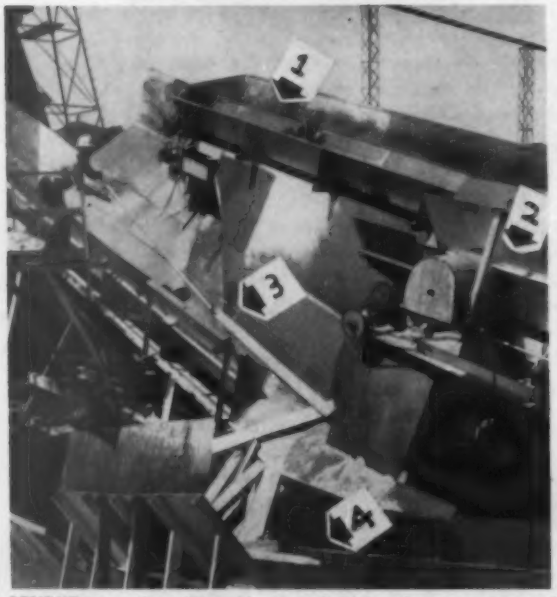
STORAGE BIN and metering gate are key to surge control. Portion of bin formed from built-up conveyor sides. Arrow shows area of meter gate and storage for chips. New chipper is located on platform.

METERED FLOW of chips is controlled by this gate. (Arrow) Note counterbalance arm. Chips are evenly spread. Two spans of Portaloy H-78 chain are used, operated at 90 fpm. Storage behind the gate.

Chip Surge Problem Overcome

and production increased with ingenious gate and storage bin



RESIDUE separation: (1) residue from headrig, edger, gang saw and barker; (2) trimmer residue only; (3) burner residue, including dust from sorting roll on No. 2; (4) chippable material going up to chipper. Can be diverted to burner as emergency control.

DOWNTIME RESULTING from non-uniform chips and from overtaxed conveyor system has been practically eliminated at Molalla Forest Products Co., Cloverdale, Calif. With the installation of a new Sumner 66", 16-knife chipper and alteration of the transfer system, 4 to 5 chip cars daily, with better quality chips, are being produced, compared with 3 to 4 cars daily in the past.

The half-inch steel plate gate levels chip flow so that the Rader Pneumatic conveyor system, set at 12 units per hour, is not overloaded. Chip accumulation, resulting from surges, which sometimes create a chip production rate of 40 units per hour, are held behind the gate. The enclosure behind the gate becomes a storage bin until flow is again absorbing production.

Maintenance superintendent Ben Haynes, who designed the installation and also the metering gate, introduces a small amount of water into the system behind the Sutorbilt blower and the feeder. This helps to prevent accumulation of resinous substance in the blower pipe.

Chippable material falls 8 feet onto the new chipper feed chains. These are Chain Belt S-189 chains with K1 and A2 attachments, operating on a 30-degree incline. These pull strongly from underneath if there is any tendency for wood to pile up. Chain rate is 250 lineal fpm, with the drive from a 5-hp Falk gear-motor. One man handles in operation. Chipper operates two shifts. [END]

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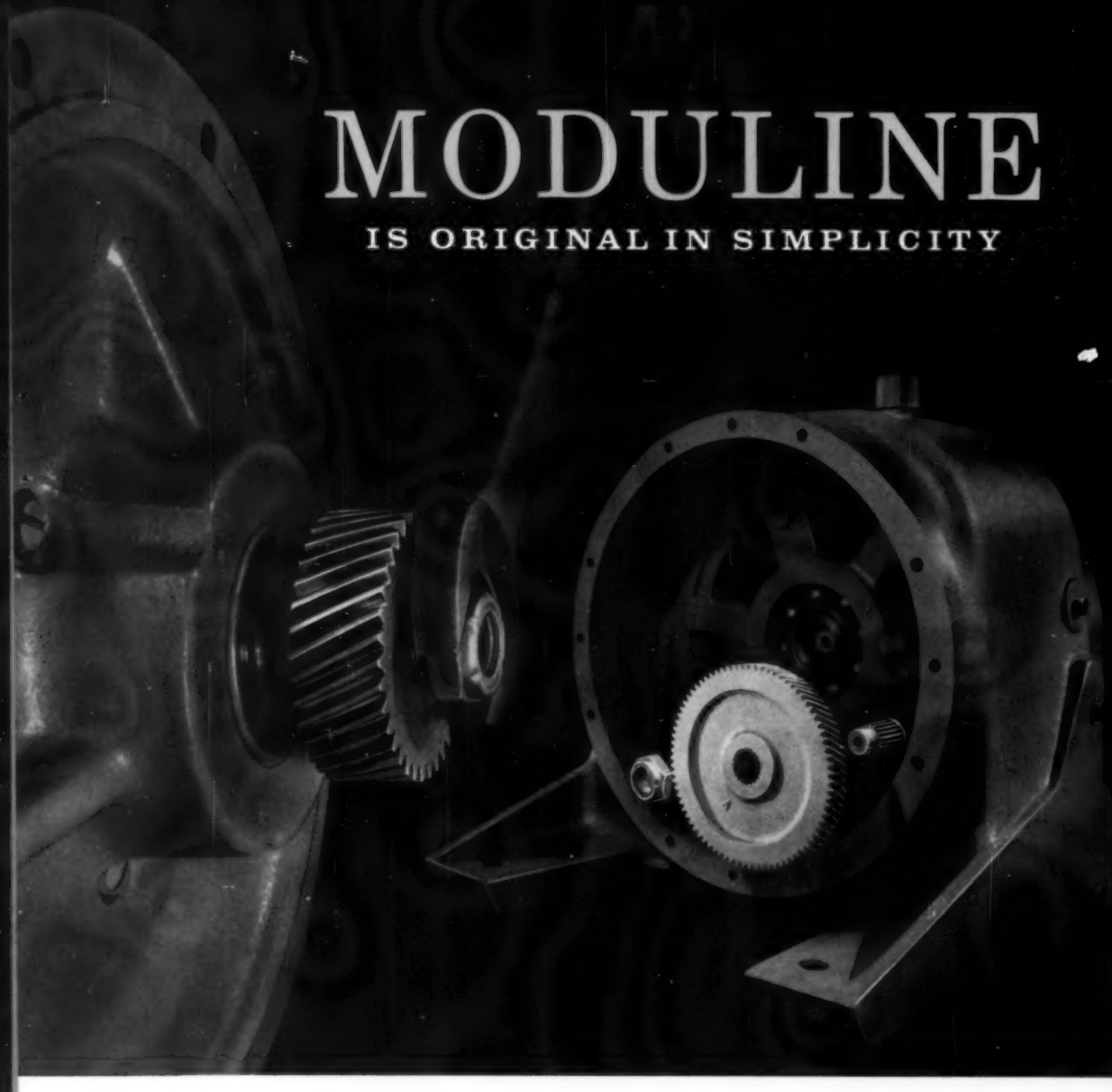

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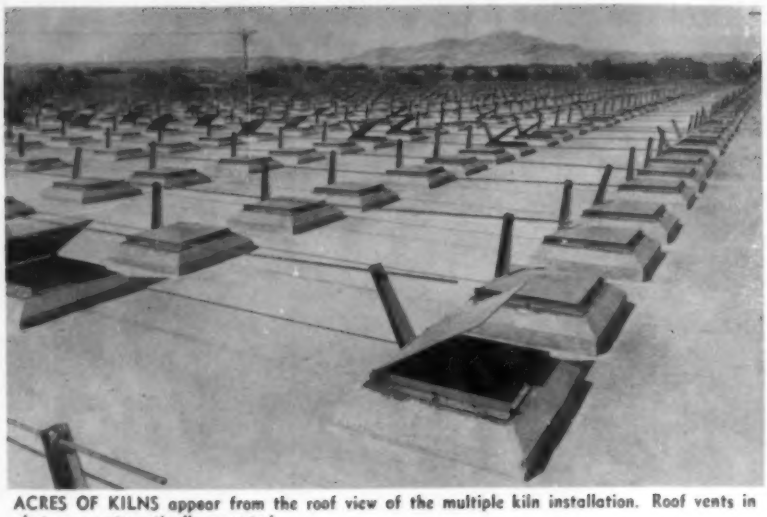
CONTROL ROOM for the 16 new Lovsted kilns showing Foxboro controls.



ACRES OF KILNS appear from the roof view of the multiple kiln installation. Roof vents in photo are automatically operated.

New Kiln Installation dries 12 million feet per month at the Emmett, Idaho, plant of Boise-Cascade, Inc.

PRODUCTION OF 12 MILLION board feet monthly is being maintained in lumber drying through use of the 16 new Lovsted "Direct-Flo" dry kilns at the Emmett, Idaho, plant of Boise-Cascade, Inc.

The Lovsted units replace 18 smaller kilns. Half the lumber was formerly air-dried. The Emmett kiln installation handles drying for the company mill at Cascade, Idaho, in addition to the Emmett production output.

Lumber is hauled by lift truck to two high speed Moore stackers mounted back to back. Two men operate each of the two units with a daily stacking capacity of from 150,000 to 200,000 feet.

Stacks are transferred by the Moore transfer car which is covered, allowing lumber protection without the necessity of a roof over the railway. The kiln trucks were also manufactured by Moore.

THE SINGLE-TRACK KILNS are 104 feet long and 18 feet high with walls of Haydite expanded shale aggregate hollow block. A reinforced concrete slab roof is insulated with an 8-inch layer of Zonolite expanded mica. The Zonolite is treated with a silicone sealer which allows kiln vapors to pass through but which keeps rain and snow water from penetrating. This construction has resulted in a dry roof slab to date after almost two years of operation.

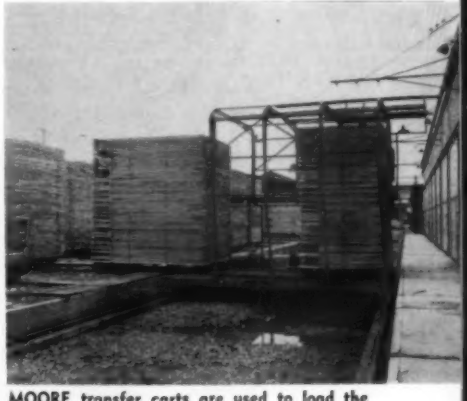
The ten 84-inch diameter aluminum alloy Lovsted disc fans in each kiln are mounted above the loads on individual special syncrogear units that circulate air through the courses of lumber and up over and through the fans. An adjustable 3-hour automatic reversing cycle is used. The individual 3 H.P. Drive Syncrogears were built for Lovsted by U. S. Electric Motors.

HEATING COILS are placed across the air path with sufficient rows of one-inch finned pipe in the coils providing ample heat and avoiding air stratification. The condensate discharged by the traps is returned to a tank and then to the boiler by a condensate pump. Individual pressure reducing stations allow adjustment of coil output to heat demand in each compartment.

Lovsted 21-inch square roof vents are employed for kiln compartment ventilation with 20 automatic and 20 manually-operated vents in each kiln. Dry and wet bulb temperatures in each compartment are controlled by Foxboro 3-pen recording controllers with dual dry bulbs and duplex action on the wet bulb. Relative humidity in the kiln compartment is controlled with steam sprays, but the wet bulb duplex action keeps adjustable lag in automatic operation of the roof vents and steam sprays, maintaining the required relative humidity with the moisture coming off the drying lumber. This results in steam saving through limiting the steam spray.

An automatic fan reversing timer takes care of automatic time reversals. In case of power failure this Lovsted unit also provides sequence re-starting of motor groups to minimize undue line load.

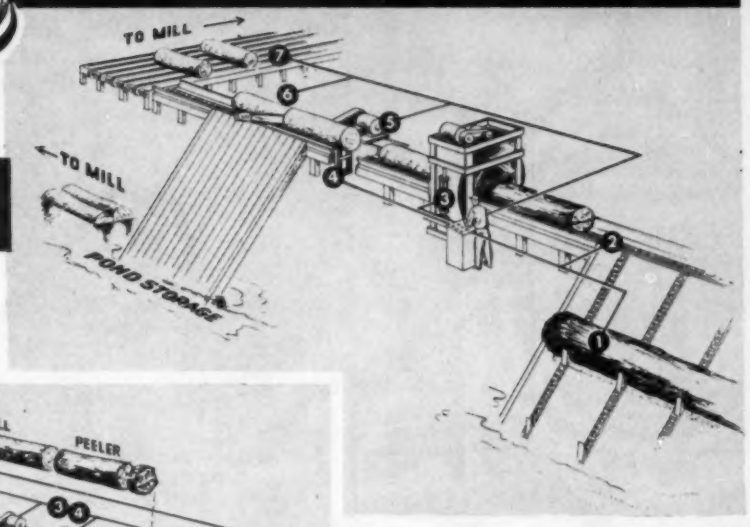
The operating room is located at ground level, providing a well-lighted easily-managed unit. [END]

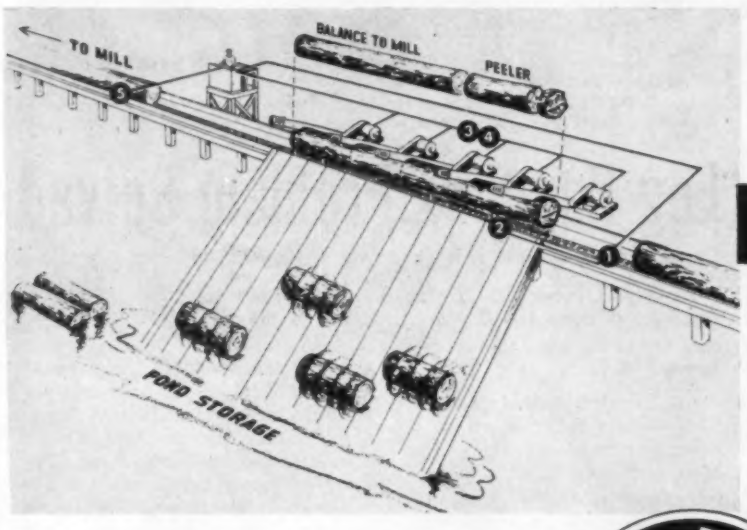


MOORE transfer carts are used to load the kilns. Carts are now under cover.

NOW L-M AUTOMATION *Does the Entire Job!*

One man operates this entire set-up with L-M Automation Controls. Controls (1) log lift from pond; (2) log conveyor; (3) Mullis Log Skinner; (4) hydraulic log lifters to position log for sawing; (5) L-M Deck Saw; (6) log kickers that return peeler block to pond storage; (7) conveyor that transports remaining log length to the lumber mill.





In this set-up, the L-M Automation operator controls (1) infeed conveyor bringing logs to saws; (2) lily-pad saw (first or last saw is auxiliary saw for making butt cuts); (3) all five saws simultaneously or individually by proper indexing of the Automation controls. When operated simultaneously, entire log is cut into peeler blocks; individual operation permits cutting one or two peeler blocks, leaving balance of log for sawmill; (4) log kickers are also operated simultaneously or individually according to pre-set indexing to direct peeler blocks to pond storage; (5) conveyor that carries balance of log to sawmill when required.

L-M Automation gives you centralized control that places every phase of an entire operation at your operator's fingertips. It eliminates much of the element of human error and assures cut after cut identically the same. You gain increased production and reduced maintenance for more profitable operation. In addition, more time is allowed for careful grading, enabling you to realize the most profit from each log.

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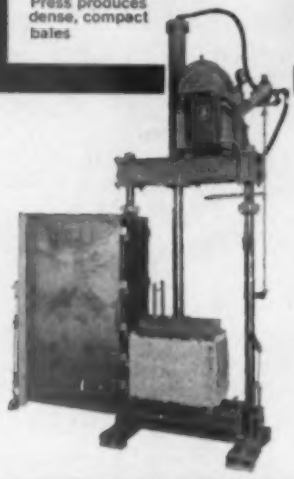

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Consult Consolidated on all hydraulic equipment problems — no obligation

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New Charcoal Product Requires No Binder

First production of pure charcoal on a large commercial basis in British Columbia is now in full swing at the South Burnaby mill of Red Band Shingle Division, MacMillan & Bloedel, Ltd.

The product is said to be unique in that it retains the clean-burning essence of wood without a binder material. The charcoal utilizes hardened wood that would otherwise be mill waste. It is processed in special retorts and broken up into individual chunks that have more surface area for burning than conventional briquettes.

The company is using $250,000 worth of equipment in this project.

●

Neal Creek Operating

Neal Creek Lumber Co. at Hood River, Ore., is back in operation again following a rebuilding job. The mill was destroyed by fire in 1956. It is a gang operation.

FULL LOAD OF LUMBER is picked up and over stakes without knocking the cheese blocks down using the Wagner Lumber-Jack at Diamond Lumber Co.'s Tillamook, Ore., plant.

Log Handling Problem Solved

with 3-wheeled, high capacity, quick moving rig

Diamond Lumber Co., Portland, Ore., faced three major requirements in its log handling operation. Needed were:

- A fast method of unloading log trucks when they arrived at the dump or reload, including a means of storing several hundred thousand feet of logs in case of a car shortage or abnormal log production.
- A machine that could sort these logs as to species for loading in the railroad cars and also separate peelers from pulp and sawmill logs.
- A machine that could transfer logs to the log pond, three-quarters of a mile away, without delaying unloading of trucks and loading of gondola railroad cars.

Diamond found the answer to its problems in a custom-produced machine by Wagner Tractor Co., Portland, Ore.

With three rather than four wheels, the unit is very maneuverable and moves quickly. The operator's cab is elevated eight feet to provide better vision in placing logs in railroad cars.

The machine is powered with a 300-hp Cummins diesel engine with hydraulic drive. It has forks for lifting logs, and additional fingers for holding logs on the forks and kickers for pushing them off. The rig will easily handle 6000 feet in a load. It is engineered for 50,000-pound loads, but will take 60,000 pounds if necessary.

CAPACITY is 6000 feet—50,000 pounds, with 60,000 pounds if necessary.

WHERE QUALITY DRYING *Really* COUNTS

Each of the 18 40-HP variable speed motors (exclusive with MOORE) located in this clean and orderly control room operates 15 fans to give individual high-powered air-circulation for each of the 18 120-foot long Moore Cross-Circulation Kilns. Note pre-wired electrical control panel for each kiln.

Special Moore electrically-driven Transfer Car with aluminum shed to protect lumber.

Moore lumber stacker with automatic sticker placer builds up uniform loads, cuts lumber stacking costs to a minimum.

Ruggedly constructed with steel angles, Modern Moore Insulated Doors last longer, save steam. Note guards for each door—another MOORE safety feature!

...*its* MOORE!

the condition of lumber *after* leaving the kiln is what *really* counts—a good reason why the safer, surer, *scientific* drying offered by Moore Cross-Circulation Kilns has helped mills throughout the country—like the Diamond Gardner Corp., Red Bluff, Calif., featured on this page—move out front in the competition for kiln-dried lumber markets!

● In addition to every kiln need, MOORE also offers labor-saving lumber handling equipment—Hoists, Electric Swedes, Setzer Sorters, Stackers and Unstackers—and Roller Dryers. And remember . . . behind all MOORE equipment stands over 75 years of engineering experience and research. Still another reason why leaders in the Industry have found "where quality *really* counts . . . it's MOORE!"

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Oldest and Largest Manufacturers of Dry Kilns and Veneer Dryers

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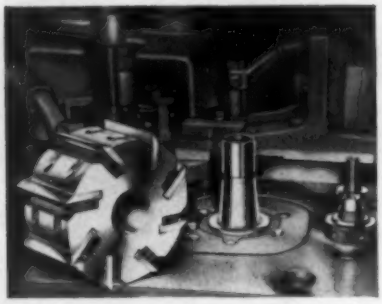
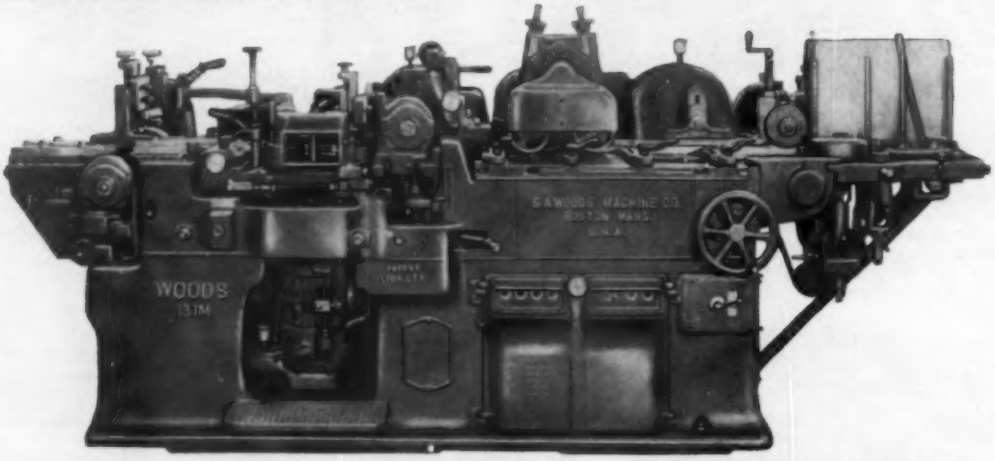
This 6" LAG BED ELECTRIC MOULDER

• *Bottom Tapered Spindle*



• *Side Tapered Spindle*

The new Woods 137MT Moulder Series brings to the Industry a new concept in spindle design, the Woods tapered spindle. Your production costs go down, your production rate increases, with Woods tapered spindles.



Cutterhead sleeves and bushings are eliminated, securing more rigid cutterhead fit on spindle. Removal and mounting of cutterheads becomes a matter of moments—a simple and easy operation. Let us tell you more about Woods tapered spindles and the many other exclusive time and money saving features built into the new Woods 137MT Moulder Series. Shown with hopper feeding attachment. Feed rates to 250 FPM.

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WTC Promoted Schliewe

Robert Schliewe, production manager of Weyerhaeuser Timber Co.'s Longview, Wash., lumber division branch, has been appointed project engineer, sawmill process, in the company's central engineering department at Tacoma, Wash. He will work in a consulting capacity with the company's lumber division branch managements, assisting branch managements in developing new and improved sawmilling processes. Among his important duties will be work with suppliers in developing new and improved equipment for manufacturing lumber. He will be succeeded at Longview by Roger Sands.

●

New B. C. Sawmill

R. E. Duggan, forester for Prince Rupert Sawmills, Ltd., Prince Rupert, B. C., reports that a $250,000 sawmill will be built by his company this year, with a planned capacity of 100,000 fbm and employing 40 men. Construction was to start in September.

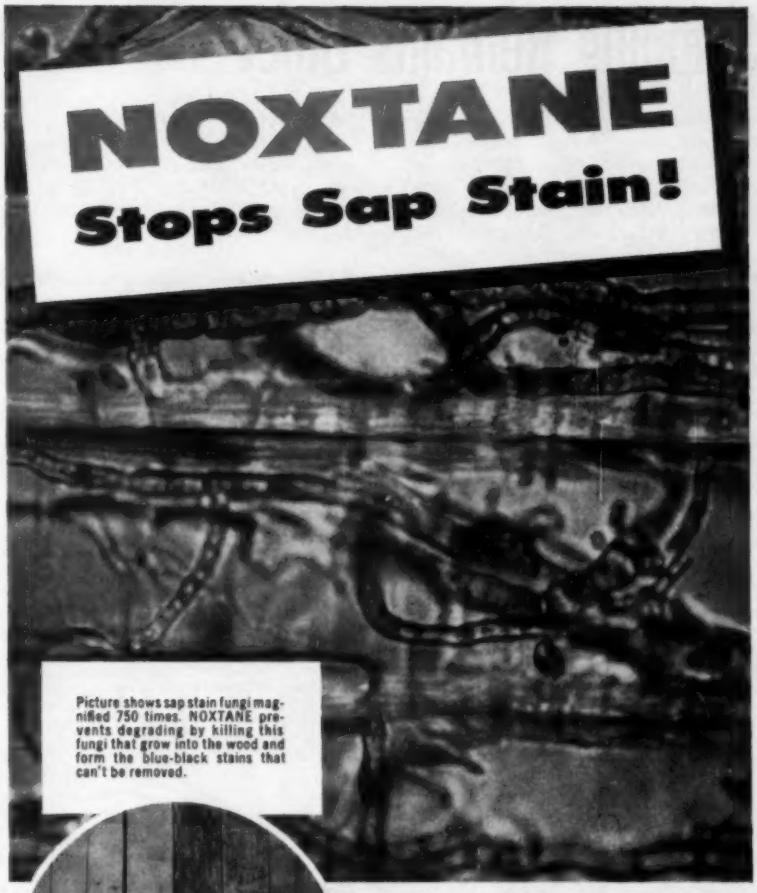
OBITUARIES

DAVID M. FISHER, retired manager of the Willapa, Wash., branch of Weyerhaeuser Timber Co., died August 23, following a heart attack at Acapulco, Mexico. Beginning a scheduled six months pleasure cruise, Mr. Fisher was stricken aboard ship. Long prominent in lumber circles, Mr. Fisher came to Raymond, Wash. in 1945 to become general manager of the Willapa branch of Weyerhaeuser, and continued in that capacity until his retirement in November 1957. Largely through his efforts an extensive rebuilding of the plant and modernization was completed last year.

Born in Birch Tree, Mo., Mr. Fisher was the son of Will P. Fisher, one of the founders of Fisher Flouring Mills Co., in Seattle. He started his lumber career as a boy doing cruising and working as a logging and sawmill hand. A graduate of the University of Washington, he served as a commissioned officer in World War I.

Mr. Fisher worked with Weyerhaeuser Timber Co. for nearly 45 years and was assistant manager of the Snoqualmie Falls, Wash. branch before being transferred to manager at Willapa.

Survivors are: his wife, a son David M., Warren Ark.; a daughter, Mrs. Donald Sellers, Seattle; two brothers, Kenneth R. Fisher and Peter Fisher, both of Seattle, and a sister, Mrs. Maxwell M. Hamilton, Palo Alto, Calif., and nine grandchildren.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Picture shows sap stain fungi magnified 750 times. NOXTANE prevents degrading by killing this fungi that grow into the wood and form the blue-black stains that can't be removed.

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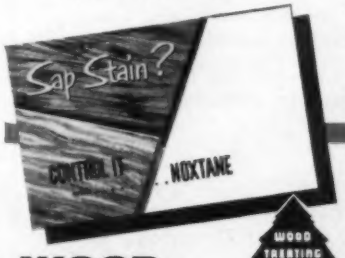

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Shipping Remains Quiet

By ROBERT C. HILL

Export lumber from British Columbia has been rather more active. Thirteen charters of foreign-flag carriers reported for discharge at North American Atlantic ports, Sept.-Dec. loading. Full cargo rates, free load and discharge range from $71,500 to $73,000 for average size carriers while two of the new supercarriers were taken at $90,000 and $97,500 respectively. Several full cargoes for United Kingdom were done at $9.80 to $10.50 per thousand feet. One lumber charter, British Columbia to South Africa, four ports of discharge, was closed at the low level of $110,000, lumpsum, free load and discharge.

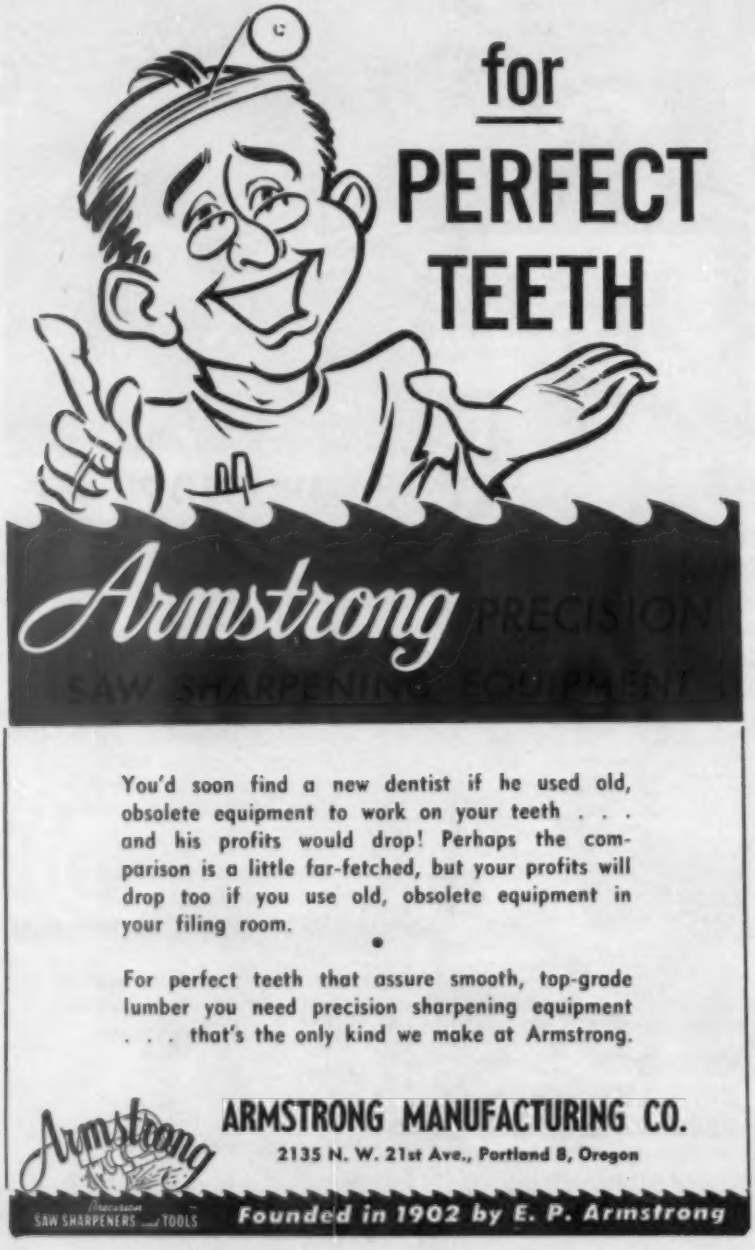
Meanwhile, conditions in the world shipping industry continue at low ebb. Following a quiet summer period, the market is entering into the usually active fall season, with minimum of activity. Rates are dragging at levels as low if not lower than at any time since the current depression began a year ago.

There are several factors that have affected the overall situation. Europe is not buying coal in volume from the United States and this has reacted adversely against trans-Atlantic shipping. Russia is said to be expanding her export markets for coal, France in particular. The movement of oil from the Near East to Europe is reported to be unusually active. A recent dispatch from Cairo stated that a new record for Suez canal transit had been established when in one day nineteen tankers, carrying 580,000 tons of oil, had passed through the waterway en route to European ports. Whether this is an indication of apprehension over pending events in the Arabian area or just a natural expansion of the oil market is not indicated. However, this has lowered the demand for United States coal and there is practically no call for trans-Atlantic coal carriers.

Again, it is apparent that national stockpiling which has been an active factor in the charter market for several years since the war, has reached the point of absorption, resulting in less call for ships. Military movement of both personnel and supplies has declined, there are financial difficulties in many importing countries. To cap the climax, the world's commercial fleet is far in excess of current offerings. Consequently it is easy to understand why the shipping industry is suffering the worst recession in recent years.

On the Pacific Coast the story is told briefly. "Too many ships, not enough cargo," is the terse comment of both owners and operators. The latter say the market has dropped to a point where profits are out of the question. Additional tonnage has been laid up. More American-flag Liberty type vessels are being offered for scrapping. Even tonnage built less than twenty years ago cannot compete economically with the larger units which have come from the world's shipyards in the last three years.

These supercarriers can outbid the average sized tramp because of their immense carrying capacity with not much additional expense for wages and fuel than the ordinary cargo ship. Such a foreign-flag tramp, with 14,000 tons cargo capacity, last month took the lowest rate in recent years when it was chartered for grain from this coast to Japan at $4.30 a ton. Early last year similar business was quoted at $12 or more.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You'd soon find a new dentist if he used old, obsolete equipment to work on your teeth . . . and his profits would drop! Perhaps the comparison is a little far-fetched, but your profits will drop too if you use old, obsolete equipment in your filing room.
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The complete changeover is simple, if you already have air dogs. If you don't, it may be possible to convert your mechanical dogs for air operation.

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A NEW SHAPE IN WOOD will feature a $250,000 forest products pavilion to be erected at Oregon's centennial exposition. Hyperbolic paraboloids formed of 2x4's and supported only at six points will comprise the futuristic structure.

Futuristic Wood Structure Due at Oregon Exposition

Wood will be shown in a striking new structure design at Oregon's centennial exposition and international trade fair to be staged in 1959.

A structure comprising seven sweeping hyperbolic paraboloids each 50 feet square, supported at just six points, will be erected as the result of efforts by a special forest industries centennial committee.

Construction will be entirely of 50-foot long 2x4's. Each 2x4 will be offslightly as it is laminated to its neighbor in construction of the hyperbolic paraboloids in creating the novel sections. It is believed that this is the first such structure utilizing 2x4's, and the first to contain as many as seven sections.

Adjacent to the building will be constructed a tree farm demonstrating the forest industry's program of perpetual tree resources.

Additional exhibits will also be included.

The forest industry members in Oregon will foot the bill on a prorated basis. The forest industries centennial committee is chairmaned by Roy Gould, Diamond Lumber Co., with A. A. Lausmann, KOGAP Lumber Industries, Medford, Ore., as finance chairman. Henry Baldridge, Publishers Paper Co., Portland, is treasurer.

Log Conveyor Replaces Pond for Hines

A $100,000 log conveyor installation will be made by Edward Hines Lumber Co. at its Oregon Lumber Division operation at Dee, Ore. As a result, the firm will cease to use Hood River as its mill pond in the interest of abating stream pollution and improving fish life.

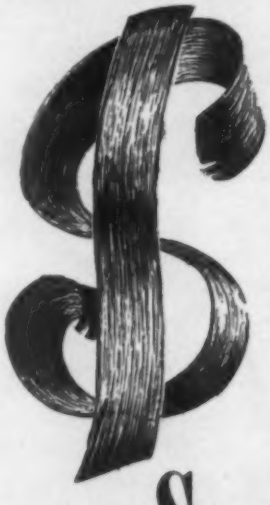
Upon completion of the installation in August, all log handlings will be on a dry basis.

The 317-foot conveyor will ride on three 100-foot truss span, 27 feet above the water. Feeder conveyors at right angles to the main conveyor will carry logs from a storage area. A LeTourneau log stacker will unload trucks, place logs on the conveyors.

CORRECTION

The special report, "Will the South Take the Lead?," published in the September issue of THE LUMBERMAN was prepared by the editors of THE LUMBERMAN and *not* THE TIMBERMAN as indicated on the cover and foot-note. Please pardon this inadvertent slip of the typesetter's keyboard and the proof reader's eye.

DOLLAR SHAVINGS



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From raw steel to final sharpening, we build in greater shock resistance and longer-lasting, sharper cutting edges . . . to give you more production at less cost.

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In Western forest and lumber industries, here's why

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Whites on the job consistently mean more board feet hauled in less time at less cost... and that's the primary objective of transportation management!

It's a proven fact—throughout the West White Diesels, with rugged lightweight components, bring out the big payloads, earn more and stay on the job longer.

In White's great new line of trucks for the forest and lumber industries, there's a model for your particular hauling operation. It'll pay you to get the facts now from your nearby White representative.

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All the way to the ultimate consumer, to the building site... White offers cost savings. The White 3000, with gasoline-powered Mustang engine, offers you a payload bonus impossible in ordinary trucks. You're always dollars ahead with Whites on the job.

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Chemical Debarking of Green Timber Tried for Pulp

Howard Smith Paper Mills and several other Eastern Canadian pulp and paper companies with extensive pulpwood stands have been carrying out far-reaching experiments in the chemical killing of trees prior to harvesting.

Between 20,000 and 35,000 cords yearly are killed chemically by Howard Smith's woodlands division.

Use of the chemical kill technique stems from the fact that chemical pulp mills need dry, clean wood. One alternative is to go into the woods, cut the trees, peel them, pile them and let them dry all summer; then ship them.

Chemical killing expedites the process. The process starts with removal of a strip of bark at the base of the tree and painting a solution of sodium arsenite on the bared portion of the trunk. The tree dies as the sap spreads the poison. The tree remains standing for perhaps a year, and when it's fully dried the tree is cut and shipped to the mill.

Because of weight changes this can effect a considerable economy in truck haul cost or rail freight. Fresh cut wet wood weighs about 5,000 pounds to the cord; wood cut and piled to dry averages 4,200 pounds to the cord. Chemically killed wood weighs about 3,800 pounds, according to the Howard Smith estimate. This represents a saving of 1,200 pounds.

PROPONENTS OF chemical killing say that when the trees are cut, peeled and piled to dry, the operator has considerable investment tied up in drying wood, whereas this would be considerably reduced with chemical kill.

They add that if chemical kill can be combined in the future with partial pulping, or with some kind of debarking agent, its use can be further extended.

In British Columbia chemical debarking or killing is virtually a dead issue, due in part to introduction of the hydraulic barker, now virtually standard equipment in most of the coast mills.

Several years ago the Western branch of the Canadian Pulp and Paper Association initiated some experimental work in the way of chemical killing in the Fraser valley and elsewhere. But economic factors eliminated the prospect of extensive adoption and the program was discontinued.

EVEN IF SOME of the trees had been chemically killed and barked, the logs would probably be put through the hydraulic barkers anyway, so the advantage would be dissipated, one member of the committee told THE LUMBERMAN.

In the East, there is a special advantage in removing bark before the river drive: pulpwood logs when barked float more easily. In Maine, chemical killing is being used to some extent during midsummer. In the fall, the trees are cut and river driven, when the bark comes off more or less automatically.

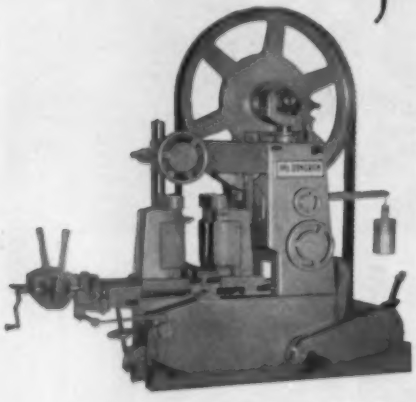
On the west coast, objection to chemical kill has been raised because bark when removed by barker is usually conveyed to the boilers and converted into fuel, replacing oil. Bark left in the woods is lost to industry. At one plant in the Vancouver area bark is being used for the production of rayflo, a product commercially used in drilling oil wells.

●

Personnel Promoted

Jim Shaw has been named general manager and W. M. Stewart sales manager of Wendell Mill & Lumber Co., Fairfield, Ida. Both men have been active in operation of the mill for several years under supervision of Ben Lasswell, who recently passed away.

McDONOUGH } **the modern resaw, designed to let you beat today's competition**

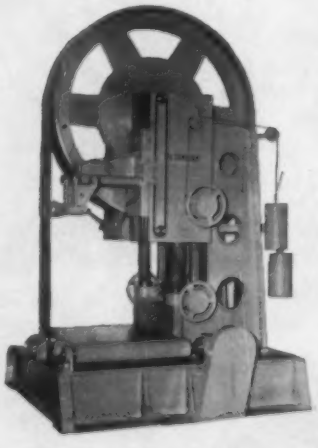


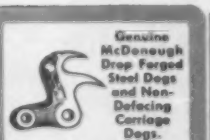
Yes, and beat tomorrow's competition, too, because the advanced design and rugged strength built into this NEW McDonough 54" Vertical Band Resaw assures you years of high production of accurately resawn lumber.

Many of the design improvements are obvious but many more engineering improvements that mean greater accuracy, more production and longer life are described in Bulletin #54-2. Write for your copy today . . . see why this is today's most advanced Vertical Band Resaw.

. . . and for the best in Band Mills choose McDonough. This 72" heavy duty Band Mill is typical of the continuing advances in design and engineering being made by McDonough . . . advances that mean more production, more accuracy, MORE PROFITS to keep you on top the competitive heap.

This mill features BIG capacity—slab and saw logs up to 60" dia., center split logs up to 45" dia., split cants up to 36"x36", has 36" fall down space—plus built-in strength and accuracy described in detail in Bulletin M72-2. Write for your copy TODAY or ask your McDonough dealer.





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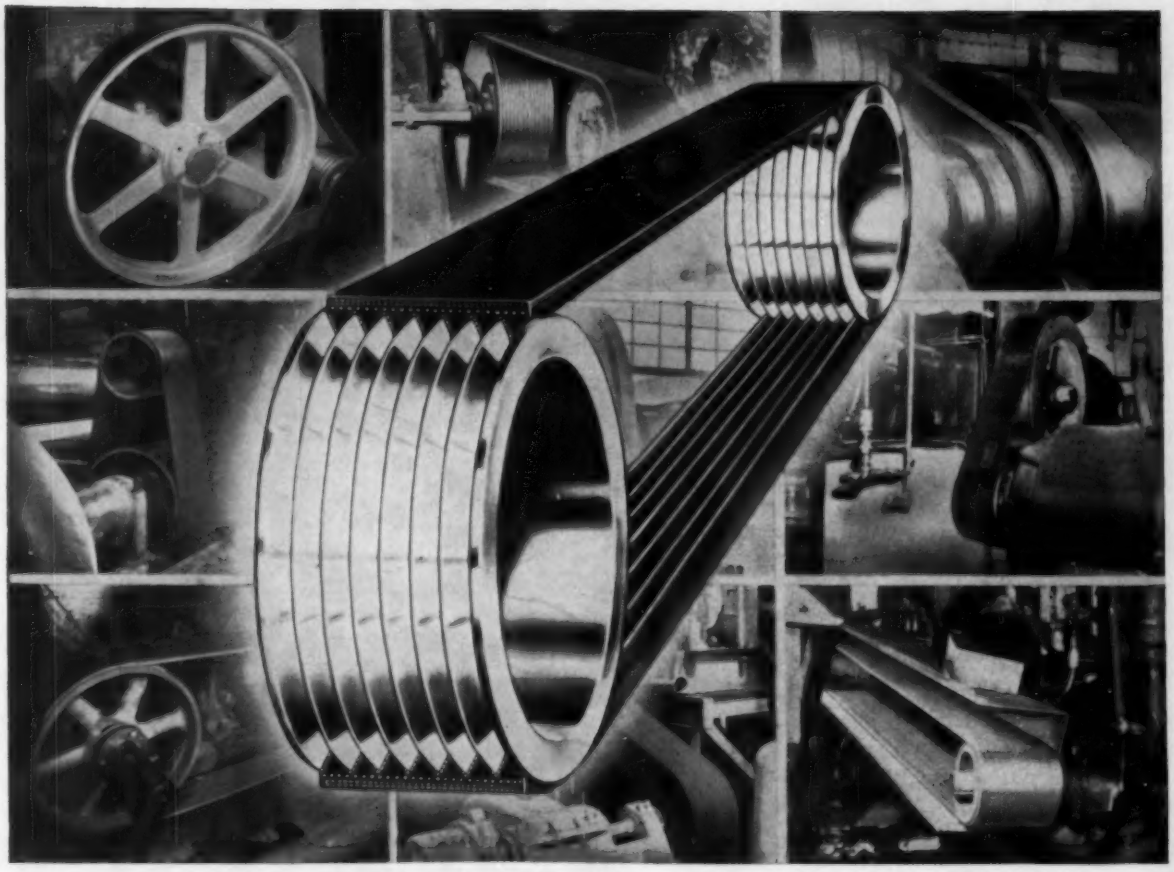

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R/M's patented new drive design is the reason. R/M Poly-V Drive employs a *single*, endless, parallel V-ribbed belt running on sheaves designed to mate precisely with the belt ribs. Flat belt strength and simplicity *plus* the high V-groove grip of V-belts adds up to *twice* the tractive surface of ordinary multiple V-belts. It's proved in actual performance on drive after drive, to deliver up to 50% *more* power in the *same* space as a multiple-belt drive . . . *equal* power in as little as ⅔ the space! Other features are equally important:

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- Smoother, *Cooler* Running . . . Oil Proof, Non Spark, Heat Resistant
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Greater power delivery and dependability for *every* drive dollar begins when you specify R/M Poly-V* Drive. R/M engineers who developed it will assist you in determining the best installation for your application. Contact your R/M representative . . . or write for Poly-V Drive Bulletin #6638.

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INDUSTRY TRENDS *(Continued from page 22)*

NATIONAL LUMBER PRODUCTION at the mid-year mark totaled 15.4 billion feet, down 9% from a year ago. Shipments are down 7%, new orders down 8% from a year ago. Gross mill stocks are continuing down, at 9.2 billion feet at mid-year are down 6% from a year ago. Unfilled order files at the mills at the mid-year totaled 1.9 billion feet, down 5% from a year ago.

THE LUMBER MARKET IN B. C. Overseas exports are no better, maybe down. But there has been a substantial increase in sales to the U. S., partly due to mill closures there, to increased housing starts and other conditions.

There is a better tone to the lumber market, but any advantages to the mills as the result of slightly higher prices for some grades and more sales is more than offset by chip pulp sales which are the lowest in years and at very low prices. Mills are able to sell only about 80% of their chip production. Mills must produce and sell chips; they can't get by on lumber alone. The long strike in the pulp mills was largely responsible for the present situation. There has been a sharp drop in prices of better grade lumber. Commons have risen a few dollars a thousand. Decking, door stock, tank stock and other clear stocks are down.

U. K. LUMBER BUYING of Pacific coast softwoods will be on a hand-to-mouth basis for several months and is unlikely to return to the bulk order basis of trading. Long-term prospects for increasing sales in Britain are favorable, although profit margins may not be high for some time. Sales potential of hemlock and red cedar is particularly good as old prejudices are being broken down.

LABOR PICTURE IMPROVES. There will be no strike in B. C. forest industry this year as the International Woodworkers of America has accepted a formulae suggested by Gordon Sloan, special advisor to the provincial government. There will be no wage increase. Indications are the forest products industry and the unions in western United States will reach an accord and there will be no strike. LSWU officials anticipate a satisfactory agreement. IWA, which earlier postponed a wage increase demand, is expected to open talks on a new contract in September.

FOURTH QUARTER PICKUP. The Dun & Bradstreet survey of business executives shows that 55% of those interviewed expect fourth quarter sales to exceed those of a year ago. The same survey for the third quarter showed 41% expecting an increase. Manufacturers of durable goods are the most optimistic. The trend on inventories has reversed, and is now upward. Orders are expected to increase, but there is still some apprehension on profits. Higher profits are most often forseen by durable goods manufacturers.

THE SUGGESTION BOX. Use of the employee suggestion box is growing, the National Association of Suggestion Systems, reports. Among the association's 1163 members, 6,628,386 employees submitted 1,692,704 suggestions last year and received $13,956,841 for their advice. One award was for $23,495. The association says the suggestion system is gaining greater attention.

FRINGE BENEFITS may one day mean trouble in employer-union relations, the U. S. Chamber of Commerce cautions. A study by the group of 1020 companies shows that 1957 fringe benefits cost an average of $981 per full time employe, an increase of $162 since 1955. These averaged 21.8% of payrolls, 48.4 cents per payroll hour.

For details call

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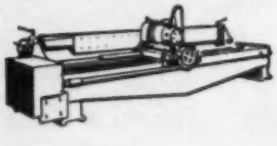

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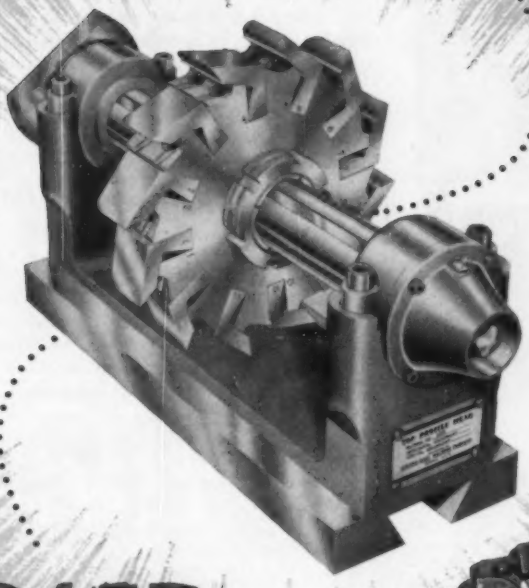
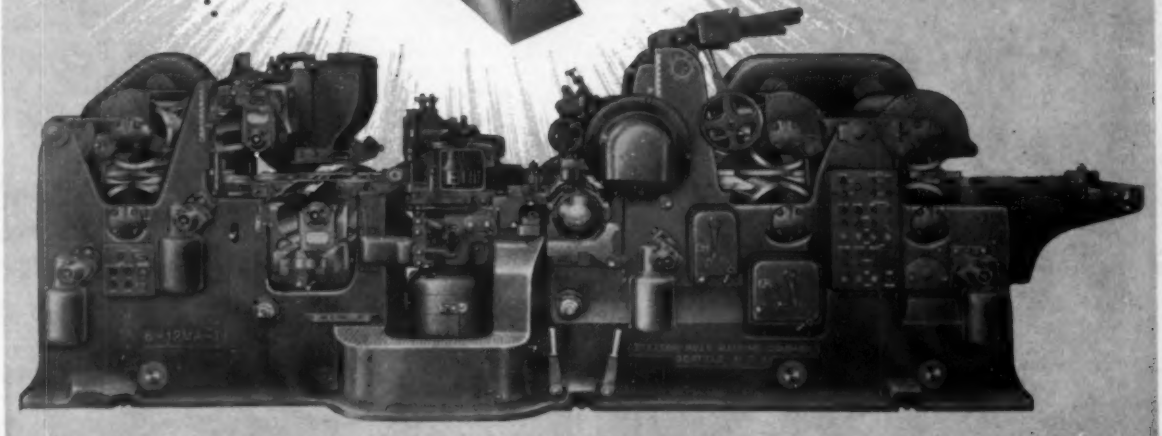


BUILT-IN AHEAD OF
OUT-FEED ROLLS.
CLOSELY COUPLES
ALL CUTTERHEADS.



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*Pre-set "cartridge" profile units built-in ahead of outfeed rolls give you highest quality millwork, and instantaneous pattern change through the use of spare "cartridge units." These are fundamentals of good machine design, developed and perfected by Stetson-Ross.

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Another large western plywood mill has a tandem set-up of 2 Timesaver Model SPL's and 2 Model TOP's. This enables them to rough and finish sand both top and bottom of the plywood panels in one straight-through operation.

These are only two of the many examples where Timesaver Sanders built into production lines are achieving savings in labor and materials while producing the desired top quality finishes. You, too, can enjoy the advantages of wide abrasive belt sanding in your shop at a minimum cost.

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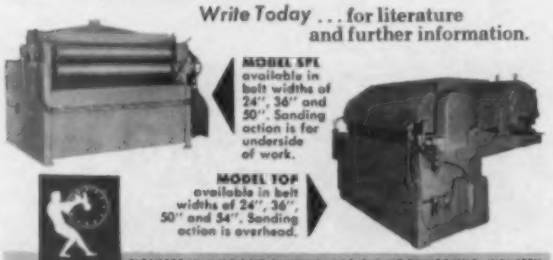

MODEL SPL available in belt widths of 24", 36" and 50". Sanding action is for underside of work.

MODEL TOP available in belt widths of 24", 36", 50" and 54". Sanding action is overhead.

PIONEERS IN WIDE BELT SANDING FOR THE WOODWORKING INDUSTRY

TIMESAVER SANDERS

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Forest Industries In Alaska

(Continued from page 33)

The heavy volume of timber per acre, the accessibility of the forests to tidewater and a climate not unlike that of Puget Sound have attracted these timber using enterprises to this region. The forest growth can support additional pulp mills and other timber using plants on a permanent basis and the public agencies directly concerned can be expected to encourage such expansion.

Studies Underway On Interior Forest

The inland area further north, with a much drier climate and shorter summers, has a widespread forest type which is a mixed stand primarily of white spruce and white birch but with aspen, cottonwood and birch, following severe fires. The spruce-birch stands are relatively light with trees largely under 16 inches diameter and the timber volume of most virgin stands of from 5 to 15 cords, although larger trees and far greater timber volumes are not uncommon.

The species of timber, size of trees and volume per acre of these Interior Alaska forests are very similar to forests occurring in eastern Canada which support a pulp and paper manufacturing industry of very great importance to the economy of the eastern provinces.

Studies of these interior forests are now being conducted indicate that further inventory work may disclose that in the relatively late past the forest area having stands of timber suitable in size for lumber and pulpwood was as much as 100,000,000 acres.

Early Fires Take Heavy Toll

Fires sweeping repeatedly over the same lands have not only consumed the standing timber on at least 75 or 80% of this forest area but apparently have greatly impaired the productive capability of millions of acres of the once better sites.

Most of this damage seems to have occurred since the Gold Rush days at the turn of the century when white men first entered the country in large numbers.

The remaining 20-25% of the more heavily timbered area that remains is in large and small patches, many of them likely to be left untouched for many years, as too inaccessible for use, but after the western hemlock-Sitka spruce forests of the South Coast are more fully developed, it can be expected that those interior forests that can be readily reached will be brought into use.

Joint Research Program a Possibility

It seems likely that the new state will include a large acreage of these better, more accessible timber stands in its selection of grant lands from the federal public domain; also that the state officials will press for a joint federal-state forest research program to determine how to bring the better burned-over lands back into production in the shortest time and at a reasonable cost.

As is generally known, 99% of the area of Alaska and a corresponding portion of its natural resources are in federal ownership. In recent years, Congress and the federal agencies in charge have been doing a fair job of making these resources available for private development and use. However, the people of Alaska because of their greater interest in the matter and their better knowledge of local conditions are thought to be in a far better position

to determine the kind of action needed to bring the various resources into use and in a manner that will result in the greatest permanent good to all of the people of the state. Apparently Congress held this view.

Terms of Grant Outlined

The statehood act gives the new state a land grant of, roughly, 103,000,000 acres or nearly 30% of the total state land area. The new state also obtains automatically ownership and full control of the tideflats and submerged lands along its shoreline to the offshore limit of 3 miles. This amounts to millions of acres with existing and potential values of a high order.

The land grants include a possible 400,000 acres of National Forest which may be selected by the State with the approval of the United States Secretary of Agriculture. Apparently it was not the intention of Congress that a large timber management block or blocks shall be transferred to the state but to provide for community expansion in localities where the National Forests approach within short distances of towns and cities. The Statehood Act described the possible selected areas as lands "adjacent to established communities or suitable for prospective communities and recreational areas."

To those who know Alaska best, its future is brighter than was the outlook for most of the Western states when they shed their territorial status. However, it must be stressed that even the best of opportunities for healthy development of a frontier, locality or region can be badly messed up by haphazard development schemes or a Gold Rush type of migration of thousands in advance of proper preparations to provide them with a source of livelihood. A wild stampede to the North is a possibility that Alaska has to fear.

Proper planning and the exercise of discretion in promoting settlement and industry with a view to avoiding hardships to families and financial failures for industries are essential at this stage of Alaska's development. Such action should permit the transition from territorial to statehood status to proceed without raising monumental problems and at the same time allow the state to achieve the high position among its sister states that appears to be possible. [END]

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Two other very popular models for woodworking plants are the smaller model, Type "NT Junior" and the heavier model, Type "NT." Write for complete information.
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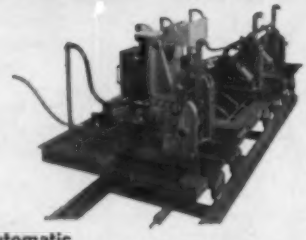
ENTERPRISE Automatic Carriages are designed for operators who know and appreciate the finest. They're the industry's best values; in use all over the world; fast-moving, flexible, accurate, easily controlled, and really built! They handle both hard and soft woods, are completely air-operated, have push-button control of knee taper, dogs, set works, flippers. Write for ENTERPRISE Bulletin 201.



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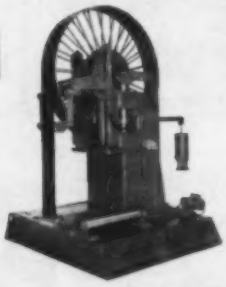

Deluxe ENTERPRISE Six-Foot Band Mill **$14,000**

UNIT 3 Carriage Feeds

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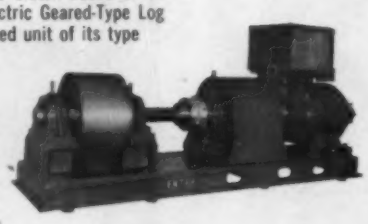
Whether you choose ENTERPRISE Twin Disc Clutch Feeds or the special WESTINGHOUSE-ENTERPRISE Electric Geared-Type Log Carriage Drive, you'll own the latest designed unit of its type on the market. Standard ENTERPRISE band mill feeds consist of a machined cable drum (roller bearing mounted) driven through bevel gearing from a pair of twin disc clutches. The special electric drive (illustrated) consists of a 35 hp motor with blower, coupled to a speed reducer, all unit-mounted on a machined welded steel base. Write for complete data.



ENTERPRISE Deluxe Feeds **$2,200 to $12,000**

ESTABLISHED 1870

THE ENTERPRISE COMPANY

Columbiana, Ohio, U.S.A.

KILN-DRIED BLACK OAK will work, as shown by these boards displayed by Eric L. Ellwood, left, wood technologist at the Forest Products Lab of California in Richmond, and Doug Cooper, his assistant.

Kiln-Dried Black Oak Tests Favorable

California black oak can be successfully kiln-dried, tests at the University of California's Forest Products Laboratory indicate. However, kiln drying from the green condition requires very critical conditions, varying with kilns and local situations. Air drying or pre-drying may sometimes be more economical, but these methods can't complete the job down to the required 8% moisture content.

Conclusions of testers followed 18 months of testing 7000 board feet of 4/4 black oak lumber under the direction of Eric L. Ellwood, chief of the lab's division of timber physics and mechanics.

In the first tests, a 3500-board foot charge was dried under accelerated conditions, including a quick fall in relative humidity. Drying time was 19 days, including equalizing and conditioning treatment. Degrade based on a before-and-after comparison of lumber grades amounted to about $2 per thousand, considered small for this kind of treatment.

According to Ellwood, initial drying conditions were very critical; surface checking developed easily unless high relative humidity was maintained.

The second run was a milder one. Relative humidity was decreased more slowly and temperature was not increased until the lumber reached 25% moisture content. Total time for treatment was 24 days—comparable to drying time for northern red oak.

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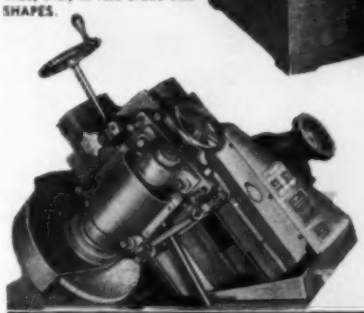

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How Long Distance makes money and saves money for business

Gluing Machine Company sticks to telephone for world sales

says H. K. Haskell, Sales Mgr. of **Mann-Russell Electronics,** Tacoma, Wash.

"Because of the world-wide market for our machines," says Mr. Haskell, "it would be impossible to serve our customers properly, or to reach new ones without the use of long distance. We frequently negotiate sales amounting to more than $30,000 via long distance, without seeing the customer or his factory."

Your telephone is one of your best salesmen. It can help you locate prospects, make sales, and keep your product sold and serviced. A call to our business office will bring a Service Engineer to show you how long distance can mean higher profits for you.

Typical low Long Distance daytime rates

From	To	First 3 Minutes	Add'l. Minutes
Spokane	Boston	$2.50	.65
Medford, Ore.	St. Louis	2.20	.55
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Fresno	Salt Lake City	1.25	.35

(Weekday, station-to-station rates, excluding tax.)

Pacific Telephone

ALL REDWOOD MAIN OFFICE is a silent salesman in the promotion of wood. The architect-designed and landscaped structure arouses much favorable reaction from visitors and employees.

OX YOKE used in 1910 is mounted in museum. Here Alden Thurman replaces goad stick atop yoke. Below yoke is sniping ax used to clear the way for the front end of the log.

Fitting a museum into a

LUMBER COMPANY'S PUBLIC RELATIONS PROGRAM

Union Lumber Co. at Fort Bragg, Calif., found it could provide an irreplaceable link with northern California's lusty lumber history. With a well-grounded public relations program already in effect, Union could have left the items of this link in the warehouses. Instead, it acted to serve the industry and the public. What it did, and is still doing provides an example of "selling lumber."

ASSORTED MILL PICTURES are mounted on large board. Under glass in background is 1885 newspaper with news item stating ". . . there will be a decrease in public debt in June of $5 million." The ship's wheel at extreme left is from a wreck that occurred in 1899.

The museum is dedicated to three categories of Mendocino coast and Ft. Bragg history: logging, lumbering and shipping.

It was officially open to the public in April 1955, following a decision made several years earlier by the late Otis Johnson, president of the company, that the old records, photos and other memorabilia should be classified and assembled for display.

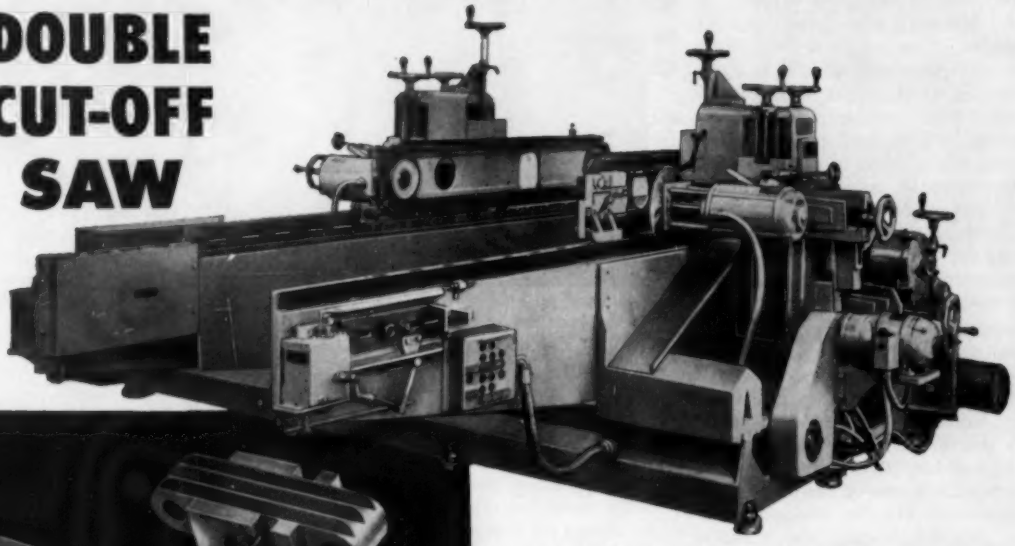
Bernard J. Vaughn, director of industrial and public relations, has basic responsibility for the museum project, which term includes both the museum building and the outdoor exhibit of heavy equipment. Alder Thurman, assistant personnel director, has direct responsibility for the project and does much of the work himself.

(Continued on page 70)

All Welded Steel Construction

on the MEREEN-JOHNSON NO. 300

DOUBLE CUT-OFF SAW



with the MULTI-V CHAIN

This special chain is furnished on the M-J No. 300. Note the 45° angle of the three V grooves to prevent sideways movement. The inverted center link clearly illustrates the full length bearing surface in both horizontal and vertical planes. There is approximately 55% greater horizontal and 95% more vertical bearing area than with low angle single V-chain. Patented snap dogs are standard equipment.

The No. 300 is offered to meet varying working conditions. It can be equipped with regular or high speed cope motors, stationary or jump dado arbor or other accessories as required. The sturdy, welded steel construction . . . rubber block hold-downs . . . snap-on feed dogs . . . and variable feed drive are only a few of its outstanding features.

Write for the No. 300 Bulletin

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TENONERS | VENEER & PLYWOOD SIZERS & JOINTERS | RESAWS

The biggest job, after the decision to make the collection available to the public, was classifying the material and determining exactly which periods in the area's history the various objects and photos represented. This required most of 1953 and 1954.

Mr. Thurman maintained, and still maintains, a record book into which went all references, leads and cross-references which might be helpful in pinning down precise dates, names, company officers and personnel and the operational areas of the early days. Chance remarks, stories by old timers, newspaper clippings, company records and other devices were used in narrowing the leads and eventually classifying, dating and displaying the materials now exhibited.

Logging crews in the woods also provided help. Knowing of the project, they brought in ancient pieces of small gear and equipment uncovered in the woods during their work there. They still do this.

The building itself is reputedly the only remaining one of the original Ft. Bragg group. The fort was named for Capt. Braxton Bragg, later General Bragg of Civil War fame.

When the decision was made to make the building the heart of the project, it was completely renovated. Fine redwood paneling in a variety of styles was installed. The "silent sell" of this example of the use of wood was enhanced by an excellent lighting system.

From the first two-room small building the display area has been expanded, first, by one additional room and, recently, by addition of a fourth room. Even so, there remains on hand much material which might be classified and displayed. Mr. Thurman frequently changes exhibits in an effort to present as much of the company and area history as possible.

Although most of the displays are Union Lumber Co. property, many people in the surrounding area have offered or lent photos which Mr. Thurman has copied. One of the more sensitive aspects of the project, he has found, is tactfully declining outside offers of material which does not fit any of the three categories on which the museum is based.

Outside the building Mr. Thurman is assembling a collection of obsolete heavy equipment. A current part of the outdoor project is display of a complete set of all types of rigging blocks. Signs will explain their uses.

The project has not only served the thousands of casual visitors who have seen it but has reflected beneficially on the company through a temporary loan arrangement whereby certain materials are used by schools, local stores' exhibits and by researchers and authors.

TAN OAK, harvested in the area for many years, is shown in a typical load slung in a rugged rack. On the log section is a photo of a string of tan oak laden pack animals.

The visitors' register reveals visitors from many foreign countries and from 47 of the 48 states. Mr. Thurman declines to reveal the state not yet represented, saying that that visitor might be among the first to tour the museum in the coming tourist season. "We're on the lookout for him."

The museum is the starting point for the plant tours which have for many years been an important part of the Union Lumber Co. public relations program. The company's overall program is similar to that which might be expected at any other company when its operation is the heart of the community.

Internally, one of the main cogs in the program is the "NOYO CHIEF," a company publication launched in 1948. This serves as a link between the company and employees and between the company and the general public. Circulation is 2,000, with copies going to employees, local merchants, elective officials, some personnel at the state capital, and to customers. The "CHIEF" is the biggest item in the PR budget.

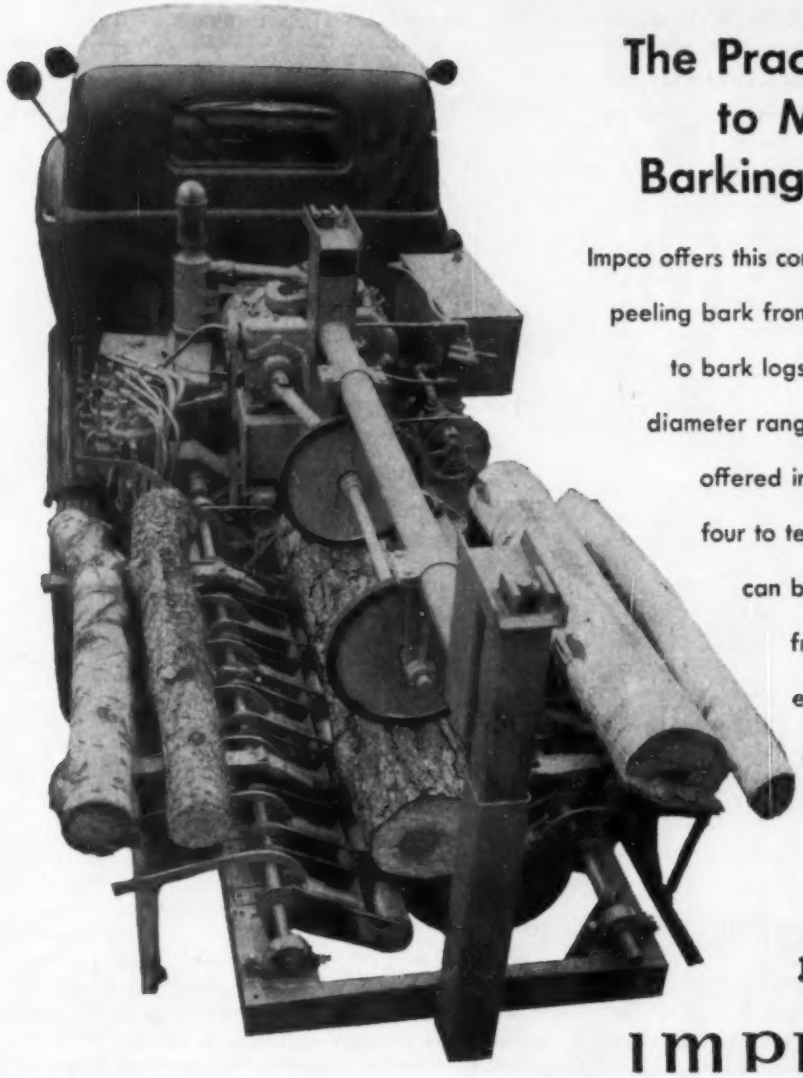
Mr. Vaughn serves as one of the 10 members comprising the board of "The Return of Paul Bunyan Days." This is a Labor Day holiday celebration which annually draws top woodsmen from all the west for the competitions. The company provides raw materials, saw logs and high poles. It erects these and remove them from the premises.

A Rhododendron and Art Festival in May is another community project in which the company figures. Lumber for static displays is donated and the company helps otherwise as it can.

For more than six years mill tours have been a big part in the program of showing Union Lumber Co. and "lumber" to visitors. An observation room was built at the barker building when the company installed its huge hydraulic barker. During summer months, a college student is hired to handle plant tours. [END]

OUTDOOR EXHIBIT includes an old upright spool donkey used from 1908 to 1916 and high wheels used from 1927 to 1932 behind a Caterpillar 60 gasoline tractor.

IMPCO
PORTA-PEELER
LOG BARKER



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Impco offers this completely new portable unit for peeling bark from any type of wood. Designed to bark logs in the three to twenty-six inch diameter range, the side-fed Porta-Peeler is offered in various models for bolts from four to ten feet in length. 100% removal can be obtained even with crooked, frozen hardwood. One man can easily *Porta-Peel* four sticks per minute. For further information, write for Bulletin F1-2.

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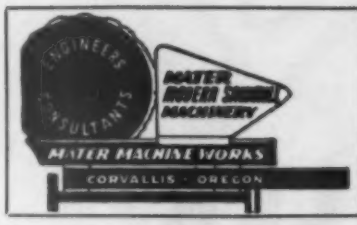

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NOMINAL QUOTATIONS • SEPTEMBER 5, 1958

STOCKS	Paid 1957	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil Com.	$	4	5	3½	4¼
American Forest Products Com.	1.00&S	21½	23½	19½	20½
Anderson Tully Co., Capt. Stk.	40.00	250	OW	250	OW
Atlas Plywood, Com.	.15	7⅜	C	6¾	C
Atlas Plywood, $1.25 Pfd.	1.25	14½	15½	11½	12½
Biles-Coleman Lbr. Co. Com.	*	17	OW	17	OW
Boise Cascade Corp. Com.	.50	26	28	24½	27
Booth-Kelly Lumber Co. Com.	30.00	650	OW	650	OW
George E. Breece Lbr. Units	.05	2½	OW	2½	OW
British Columbia Forest Prod., Com.	.50	12⅞	C	12	C
Brooks-Scanlon, Inc. "A"	.95	23	OW	23	OW
Brooks-Scanlon, Inc. "B"	.95	23	OW	23	OW
Calaveras Land & Timber Co. Com.	2.00	20½	OW	20	22
Calcasieu Paper Co., Com.	.50	25	OW	25	OW
Cascades Plywood Co. Com.	1.25	27	28½	28	29½
Central Coal & Coke Co. Com.	1.00	28	30	28	30
Cherry River Boom & Lbr. Com.	2.00	30	35	29	OW
Chicago Mill & Lbr. Co. Com.	1.25	23¾	25½	25	26½
Cloquet Lumber Co. Com.	*	1	OW	1	OW
Consolidated Naval Stores, Capt. Stk.	22.00	700	OW	600	OW
Container Corp., Com.	1.00	24⅛	C	24¾	C
Container Corp. 4% Pfd.	4.00	85	C	94	C
Crossett Company, Class "A"	.60	29½	32	28	29½
Crossett Company, Class "B"	.60	29½	32	28	29½
Crown Zellerbach, Com.	1.80	55	C	51¼	C
Crown Zellerbach, $4.20 Pfd.	4.20	94	C	98½	C
Curtis Companies Com.	.10	7½	8½	7¼	8¼
Dierks Forests, Inc.	5.00	115	OW	115	OW
Evans Products, Com.	1.45	16¼	C	14⅞	C
Fordyce Lumber Co., Capt. Stk.	1.25	35	OW	35	OW
General Plywood, Com.		18¾	C	18⅞	C
Georgia-Pacific Co., Com.	1.00	44⅝	C	42¼	C
Harbor Plywood, Com.	.45	19⅛	C	19¼	C
Edward Hines Lumber Co., Com.	2.50	37½	39½	35	37
Holmes Eureka Lumber Com.	.10	2¾	3½	2⅝	3¼
Insular Lumber Co. Com.	1.25	12½	14	12½	14½
International Paper, Com.	3.00&S	110	C	104⅝	C
International Paper, $4 Pfd.	4.00	90	C	92½	C
Keyes Fibre Co. Com.	1.20	21½	23½	21¼	23
Kirby Lumber Corp. Com.	1.00	42	45	38	40
Longview Fibre Co. Com.	2.80	74	77	70	OW
Louisiana Central Oil & Gas Co. Com.	12.00	50	OW	50	OW
Louisiana Long Leaf Lumber Co. Com.	20.00	70	OW	70	OW
Louisiana Sawmill Co. Com.	.....	½	OW	½	OW
MacMillan & Bloedel, "B" Com.	1.00	34¼	C	34	C
McCloud River Lumber Co. Com.	4.00	72	76	65	70
McCloud River Railroad Co., Com.	1.00	32	OW	30	OW
Meadow River Lumber Co. Com.	*	200	OW	200	OW
Medford Corp. Com.	7.00	165	OW	160	180
Mississippi Land., Capt. Stk.	2.40	12	OW	12	OW
Northwest Paper Co. Com.	.80	26	29	26	29
O. & N. Lumber Co., Capt. Stk.	3.00	42	OW	42	OW
Olin Oil & Gas Co. Com.		16¼	18	19	20
Ozan Lumber Co. Com.	4.00	90	OW	90	OW
Pacific Lumber Co., Capt. Stk.	10.00	215	OW	210	OW
Pickering Lumber Co. Com.	.55	10	11	10	11
Pine Tree Manufacturing Co. Common	1.26	50	OW	50	OW
Pope & Talbot, Inc. Com.	1.25	27	29	24½	26
Pope & Talbot, Inc. Pfd.	.30	4¾	5¾	4¾	5¾
Potlatch Forests, Com.	1.00	53½	56½	53	56
Powell River Co. Ltd. Com.	1.50	37½	40	36½	38
Puget Sound Pulp & Tbr. Co., Com.	.80	17¾	C	17½	C
Richmond Cedar Works Mfg. Com.	.....	½	1	½	1
Richmond Cedar Works Com.	.....	1	2	1	2
Ritter, W. M., Lumber Co., Com.	2.00	35	40	40	45
Rock Island Millwork Co., Com.	*	25	OW	25	OW
Roddis Plywood Co. Com	.45 &S	12	13	10	11
St. Regis Paper, Com.	1.55	39⅝	C	39¼	C
Southern Minerals Corp. Com.	.....	4	5	4	5
Southwest Lumber Mills, Com.	4% Stk.	8	9	7½	8½
Tremont Lumber Com.	2.00	65	OW	65	OW
U. S. Plywood, Com.	2.00	39⅞	C	35½	C
Union Lumber Co. Com.	1.25	46½	OW	44½	49
United States Lumber Com.	.35	3¼	4¼	3½	4
Upson Company Com.	1.20	13¼	14¼	12	14
Weyerhaeuser Timber	1.00	41¾	43¾	41¾	43¾
Winton Lumber Co. Com.	.92	15	OW	15	OW
Wood Conversion Co. Com.	.40	14¾	16¾	14½	16½
Wooduse, Inc., Com. (Now Fersolin Corp. Com.)	.....	½	¾	⅜	5/8
BONDS					
Georgia-Pacific Corp. Subordinated Deb., 5s due 1976		87	90	85	88

*Information not available
OW—Offerings Wanted
BW—Bids Wanted
S—Stock
C—Last sale on Exchange where listed or bid.

THE ABOVE INFORMATION, WHILE NOT GUARANTEED, IS OBTAINED FROM SOURCES WE BELIEVE TO BE RELIABLE

High Pressure Pneumatic Conveying Equipment

RADER PNEUMATICS INC.

1739 N. E. 42nd Ave. • Portland 13, Oregon

● Whether you need phenol-formaldehyde, urea-formaldehyde, resorcinol or PVAc adhesives, soybean or casein glues, Reichhold can supply you. RCI has "the full line!"

When it comes to delivery, you can count on Reichhold for speed, too! Widely located RCI plants and warehouses can fill all your needs for any of these adhesives without delay...by rail tank car or highway tank wagon.

And you can be sure of uniform performance, because RCI control of adhesive quality extends to manufacturing its own basic raw materials such as phenol and formaldehyde.

When you have a technical problem, RCI's nationwide field service laboratories are ready to help you solve it . . . whether it involves a special glue for hot press, cold press, R/F, patching, splicing, utilizing wood waste or some completely new job.

Let Reichhold fill all your adhesive needs . . . technical information included!

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Synthetic Resins • Chemical Colors • Industrial Adhesives • Phenol
Hydrochloric Acid • Formaldehyde • Glycerine • Phthalic Anhydride
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REICHHOLD CHEMICALS, INC.,
RCI BUILDING, WHITE PLAINS, N.Y.

Creative Chemistry... Your Partner in Progress

RCI

KEY PRODUCTION UNITS in layup plant are Coe dryer (above) and Williams-White hot press (right). Coe automatic feeder for steam dryer shown. Dryer is 5-line 18-section installation with Viking deluge fire protection system. Hot press is 5x9-foot 24-opening Oilgear-pressured machine. Charger and receiver built by Dwyer plant engineer Hjalmar Nelson who designed and supervised construction of several items in addition to plant layout.

Addition of Plywood Plant increases utilization

and gains stumpage cost advantage for Dwyer Lumber and Plywood Co.

"A COMPANY EXISTING entirely on federal timber sales must utilize total value of its logs to remain on top of the market," according to officials of Dwyer Lumber and Plywood Co., Portland, Ore., who have just completed a finish plywood plant to round out their utilization.

The company, starting with a band mill, has progressively added a gang mill, planing mill, dry kilns, barker, veneer plant and now—the layup unit. (See "Getting More Dollars per Board Foot, THE LUMBERMAN, Sept. 6, 1957.)

Dwyer president, Anthony J. Dwyer, recently said in commenting on the mill, "The development of this plant has been almost entirely predicated on our competition for timber. We must have complete utilization to stay on top in the bidding."

"The plywood producers had somewhat of an edge in the bidding. Our green end helped quite a bit, but the logical outcome was the finished product."

The plant is running one lathe shift, two spreader shifts and three shifts on the dryer. Production is about 42 million square feet annually, ⅜-inch basis.

Hemnoply, hemlock sheathing plywood, is one specialty with a fortified blood glue employed guaranteed to last six months for uncovered exterior use and 12 months when covered.

PLANT EQUIPMENT

Williams-White 24-opening 5x9-foot hot press with company-built charger and receiver; Coe 5-line 18-section dryer with Coe feeder and Viking deluge system; Globe spreader with Controls & Communications automatic glue leveler; Laucks Sentry continuous moisture meter; Globe rotary clamp jointer; Diehl tapeless splicer; Mann-Russell R.F. electronic edge gluer; Skoog patcher; Salem Iron Works core saw; Jenkins tenoner; Globe scissor-lifts; Peninsula hog; American Sheet Metal Works blower systems; Fluckinger glue mixer; Jenkins double-end tenoner; Globe cutoff saw; Yates-American 8-drum sander; Oakley stroke sander; Ingersoll-Rand type 30 air compressor; Monsanto, Borden and American-Marietta resins; Allen Bradley limit switches; Ritter Roof Structures trusses; Clark and Towmotor lift trucks; Grinnell sprinkling system.

Monsanto, American-Marietta and Borden glues are used.

SALES ARE MOSTLY LOCAL with 70% of the plywood sold in the local area. Truck shipments are also made to Utah, Montana and Idaho. The company does a great deal of mill-selling of all its wood products directly to the consumer.

Mixed truck shipments are common with some plywood shipped on a large number of trucks leaving the mill.

Shipment is not confined to truck. A five-car railroad siding inside the plant provides ease in carloading which is done by Clark and Towmotor lift trucks.

The building is 258 feet square with 87-foot Ritter roof trusses installed with carrying trusses allowing posts 40 feet apart on the operating floor. Lumber siding is used with a shiplap roof. A total of 64 men are employed.

(Continued on page 76)

MANAGEMENT: Hjalmar Nelson, plant engineer; Edwin Dwyer, v.p. and general manager; Joe Petrovich, in charge of plywood production. G. R. Steward, Dwyer plant supt., and Gordon Ellison, plywood supt. (not shown).

BIG NEWS!

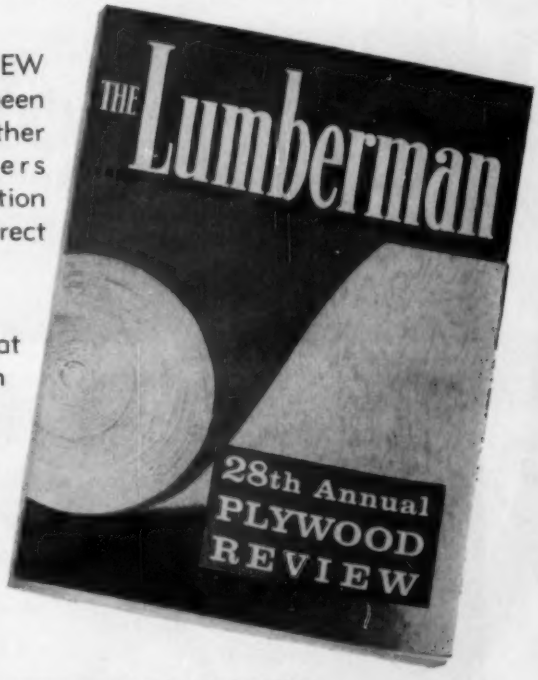
about THE LUMBERMAN'S 28th ANNUAL PLYWOOD REVIEW

to be distributed December 31, 1958

. . . . here's why it represents a BIGGER advertising opportunity than ever before . . . .

Distribution of the 28th ANNUAL PLYWOOD REVIEW will be increased over 35% above that of any previous Review edition. 10,000 copies . . . above THE LUMBERMAN's regular circulation . . . will be sent to men and firms who sell, use or recommend the use of plywood in all sections of the U. S. This group will include leading architects, builders and plywood distributors. Coverage will include 100% distribution among the softwood plywood manufacturers . . . and wide circulation among other plywood industry contacts on the manufacturing side. Total distribution: approximately 28,000 copies! . . . at no advance in regular advertising rates.

THE LUMBERMAN'S ANNUAL PLYWOOD REVIEW (formerly published by The Timberman) has long been regarded as the Plywood Industry's yearbook. No other advertising and sales promotional opportunity offers such desirable coverage and industry-wide penetration of the men who make the purchasing decisions and direct buying policies in the plywood field.



Regardless of your over-all plans, make certain that you are represented in THE LUMBERMAN'S 28th ANNUAL PLYWOOD REVIEW with an advertisement that tells your current sales story. The Review edition will be distributed December 31, 1958. Advertising forms close December 1. For best positioning send your space confirmation in today!

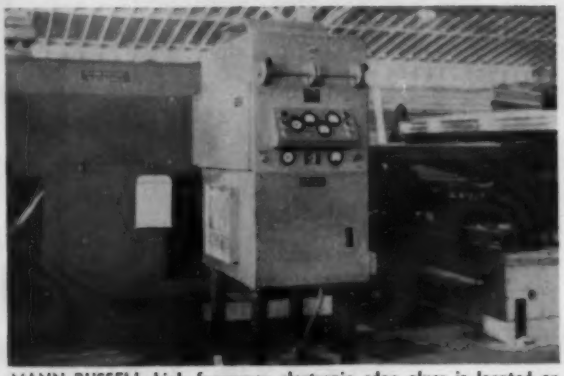
THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

PUBLISHING OFFICE: 731 S.W. OAK ST. • PORTLAND 5, OREGON • CApitol 2-1314

VENEER EDGING AND PATCHING AT THE NEW DWYER PLYWOOD PLANT

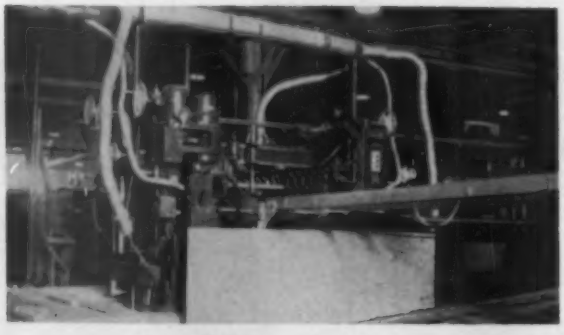
GLOBE ROTARY CLAMP JOINTER joints and applies glue to veneer. One man operation. Stacks offbear across table to serve both electronic edge gluer and tapeless splicer. Unit is important in gaining full utilization of veneer.



MANN-RUSSELL high frequency electronic edge gluer is located on offbear side of veneer jointer. Clipper clips to pre-determined width on off-side of gluer. Control panel for unit at center. Highest recovery from raw material is plant objective.

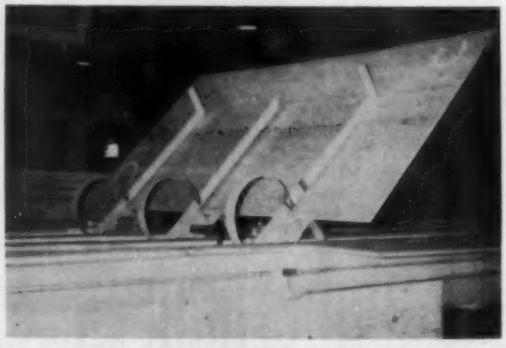
DIEHL TAPELESS SPLICER glues face sheets for later use in layup. Stock comes across rolls from Globe rotary clamp jointer in background. Offbears to foreground.

SKOOG PATCHER patches face stock. Shell lubrication chart (right) is affixed to all machines. Gives listing of proper lubricants for each machine and frequency of lubrication required.



SIZING is handled on production line with Jenkins double-end tenoner (left) sizing panels. Jenkins machine can also cut-to-size and produce specialized facings. Cut-off is done on Globe saws (lower left) which offbear to grading table. Turner (below) automatically turns panel for grader so as to view both sides. Panel hits limit switch which actuates air-operated ratcheted wheel which chain-drives turner. Panels offbear to company-built stacker designed by Hjalmar Nelson. Stops saws and offbears when stack full.

More on Dwyer Plant on page 78



MONEY DOES GROW ON TREES . . .

and JACKSON

makes it more profitable

When it comes to a highly efficient veneer operation a JACKSON VENEER LATHE IS YOUR BEST BET! Surely . . . there are more profitable dollars to be had when you put the many features of a Jackson Lathe into operation. These precision built lathes have a central control panel that is simple to operate . . . a quick change gear box . . . hydraulic hoist . . . hydraulic chucking . . . Timken bearing equipped . . . and all-steel frame construction. Jackson also features a very efficient back roll operation. A letter, wire or telephone call will bring a Jackson Engineer to discuss your problem . . . there is no obligation.

SALES ENGINEERS { E. V. PRENTICE CO.
2302 N. Randolph Ave.
PORTLAND 12, OREGON

VENEER MACHINES DIVISION

JACKSON INDUSTRIES INCORPORATED

Birmingham • Alabama

DWYER PLYWOOD PLANT *(Continued)*

DRUM SANDING is handled on Yates-American S800 8-drum unit (above) with an Oakley stroke sander installed.

Sander dust is piped through American Sheet Metal Works blower system directly into fifebox at boiler. American cyclone in foreground at right handles sander dust. Cyclone in background handles hogged strips from saws hogged in Peninsula unit. Hog fuel is blown to the plant's fuel bins. Lumber-sided building employs Ritter Roof Structures trusses. [END]

Continuous Production,
Greater Economy with a

WILLIAMS-WHITE HOT PLATE PRESS

If you are considering the purchase of a hydraulic press for producing plywood, hardboard or allied products on either an experimental or production basis, the WILLIAMS-WHITE Hydraulic Press should be included in your planning.

Low initial cost, long and trouble-free life, and complete customer satisfaction and confidence displayed by over 280 laboratory and production installations, truly make the WILLIAMS-WHITE Hydraulic Press the hallmark of the industry.

A typical example of repeat orders is the installation of two 572-ton, 106" x 54" hot plate presses, illustrated, in the Merlin, Ore., plant of Bate Lumber Company.

Why not discuss your requirements with us before you buy?

REPRESENTATIVES:

ALLIED NORTHWEST MACH. TOOL CORP., Portland, Ore.
PERINE MACHINERY AND SUPPLY CO., Seattle, Wash.

BUILDERS OF MACHINERY SINCE 1854

WILLIAMS-WHITE & Co.
310 EIGHTH ST. • MOLINE, ILLINOIS
PRESSES • BULLDOZERS • BENDERS • PUNCHES • SHEARS

Lumber Prices

Douglas Fir

1x8	Utility S4S KD	$ 58- 61.00
2x4	Construction Dimension S4S KD	85- 87.00
1x4	C&Btr VG Flooring KD	170-173.00
1x6	C&Btr Drop Siding KD	150-155.00
1x6	C&Btr S4S KD	170-175.00
1x8	C&Btr S4S KD	165-170.00
1x10	C&Btr S4S KD	170-175.00
1x12	C&Btr S4S KD	215-220.00

Construction Timbers and Plank

3x12	6-20′	$ 82- 85.00
3x12	22-24′	87- 90.00
3x12	26-32′	95-100.00
4x4	8-20′	83- 86.00
4x4	22-24′	88- 91.00
4x4	26-32′	96-101.00
6x6	8-20′	80- 83.00
6x6	22-30′	87- 90.00
6x6	32-40′	102-105.00
8x8	8-20′	77- 80.00
8x8	22-30′	82- 85.00
8x8	32-40′	97-100.00
6x10, 8x10, 10x10, 12x12	8-20′	78- 81.00
6x10, 8x10, 10x10, 12x12	22-30′	83- 86.00
6x10, 8x10, 10x10, 12x12	32-40′	98-101.00

Construction Dimension (Green)

2x4	6-24′	$ 74- 76.00
2x6	6-24′	75- 77.00
2x8	6-24′	74- 76.00
2x12	6-24′	75- 77.00

Standard & Btr. Boards (Green)

1x4	6-20′	$ 52- 55.00
1x8	6-20′	65- 68.00
1x12	6-20′	63- 66.00

Douglas Fir Plywood

¼-inch AD SOIS	$76.00

Southern Pine (KD Stock)

Vertical Grain Flooring

	B	C	D
1x4	$210.00	190.00	153.00

Flat Grain Flooring

1x4	150.00	135.00	125.00
1x6	180.00	160.00	123.00

Drop Siding

1x6 No. 106	185.00	167.00	130.00
No. 116	185.00	167.00	130.00

Boards and Shiplap

	1x6	1x8	1x10	1x12
No. 1	120.00	123.00	127.00	172.00
No. 2	80.00	85.00	83.00	97.00
No. 3	70.00	78.00	75.00	74.00

No. 1 Dimension

	12	14	16	18	20
2x4	98.00	98.00	98.00	115.00	115.00
2x6	96.00	97.00	96.00	110.00	110.00
2x8	92.00	92.00	91.00	108.00	108.00
2x10	103.00	97.00	103.00	120.00	120.00
2x12	115.00	105.00	107.00	120.00	125.00

No. 2 Dimension

	12	14	16	18	20
2x4	91.00	91.00	91.00	104.00	104.00
2x6	90.00	90.00	87.00	100.00	100.00
2x8	88.00	88.00	86.00	100.00	100.00
2x10	89.00	91.00	89.00	102.00	102.00
2x12	96.00	96.00	94.00	108.00	113.00

Western Pine

Ponderosa Pine

Selects S2 or 4S	4/4RW	5/4RW	6/4RW
C Select RL	$255.55	$259.18	$254.28
D Select RL	154.83	174.89	174.82
Shop S2S	No. 1	No. 2	
5/4	$126.61	$ 94.5 8	
6/4	126.04	94.50	
Commons S2 or 4S	No. 2	No. 3	
1x8″ RL	$ 99.23	$ 67.74	
1x12″ RL	114.22	72.09	
4/4 No. 4 Common S2 or 4S			$ 52.07

Idaho White Pine

Selects S2 or 4S	4/4 RW	6/4 RW	
Choice (C) RL	$267.51	$303.00	
Quality (D) RL	171.38	259.75	
Commons S2 or 4S	Col.(1)	Ster.(2)	Std.(3)
1x8″ RL		$135.22	$ 85.52
1x12″ RL		161.33	89.86
4/4 Utility (No. 4) S2 or 4S RW&L			$ 59.50

Sugar Pine

Selects S2 or 4S	4/4RW	5/4RW	6/4RW
No. 1 & 2 Clear RL	$283.94	$274.31	280.19
C Select RL	272.50	269.04	269.78
D Select RL	170.78	184.58	184.89
Shop S2S	No. 1	No. 2	No. 3
5/4	$132.77	$ 96.19	$ 66.54
6/4	132.91	96.92	65.25
8/4	150.65	102.81	67.16

Larch-Douglas Fir

4/4 No. 3 Common S2 or 4S		$ 65.29
2x4 No. 1 Dimension RW&L		78.83
2x4 No. 2&Btr. Dimension RW&L		68.74

Facilities Expanded

Expansion of facilities at its Chicago regional sales office has necessitated a move to larger quarters by Southwest Lumber Mills, Inc., according to S. A. Shrigley, vice-president in marketing. Chicago offices are now located at 2601 Field Building, 135 South LaSalle Street.

●

• Edward W. Campbell, vice-president in industrial relations for Crown Zellerbach Canada, Ltd., Vancouver, B. C., is retiring due to ill health, but will retain his association with the company on a consulting basis.

CONWAY and FIELDS

Quality—Performance in Plywood Machinery

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EDERER

BALDWIN

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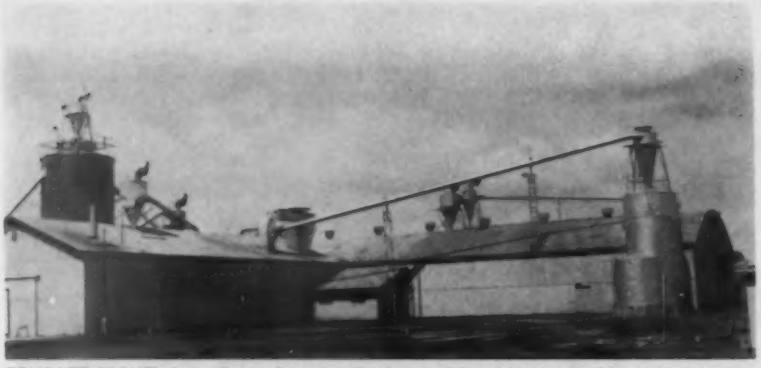
REDCO

LAUCKS

1623 S.E. 6th Ave.

PORTLAND, OREGON

BElmont 2-4174



COMPACT PLANT shows drying, hammermill wing, at left, with particles blown through upper blowpipe across to dry surge bin at extreme right. From here chips enter process working left through main building and process. Extensive use made of Medford Blowpipe blowers throughout the entire Pacqua plant operation.

SURGE BIN for hammermill holds 4,000 cubic feet. Particles blown to bin through top pipe. Storage in foreground, or particles can go to fuel house (left) if surplus.

Plywood finishing department does double duty for

Integrated Pacqua Particle Board Plant

with green end residues furnishing raw material at Dillard, Oregon

PARTICLE BOARD AND PLYWOOD plant production can be closely integrated as demonstrated at the new Pacqua, Inc., division of Pacific Plywood Co., Dillard, Ore. Here, veneer residues are used for raw material with the resulting board later finished in the plywood plant's finishing department.

PLANT MANAGEMENT keeps close tab on board production. (left to right) William Cooke, plant manager; Ron Frashour, superintendent; Paulus McKee, general manager.

Residues from Pacific Plywood's green end are hogged and blown to the particle board plant with a three-way choice at this point. Particles can either go directly to the hammermill surge bin, be discharged on a concrete slab for storage, or proceed to Pacific Plywood's steam plant fuel bin when sufficient particles are available.

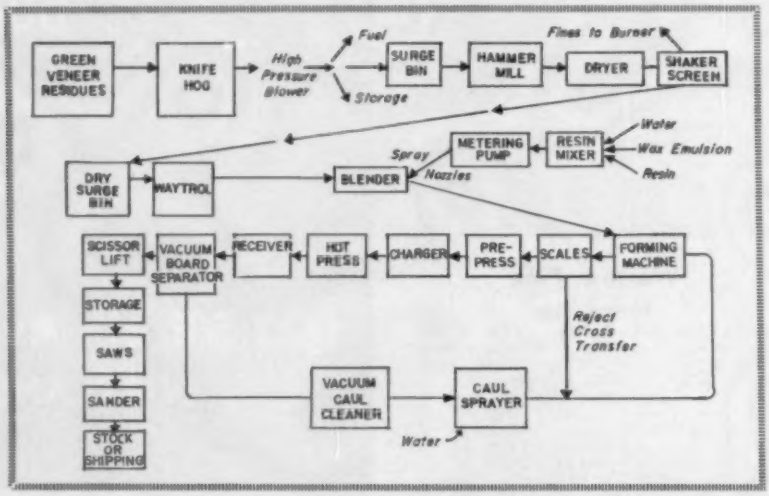
Plant manager William Cooke and superintendent Ronald Frashour designed the plant and supervised installation of equipment. The production utilizes a conventional hammermill-hot press system.

PRODUCTION is in two principal board classifications: *Par-Wood*, an interior board produced with urea-formaldehyde resin, and the exterior *Par-Tex* employing phenolic resins.

A large part of the plant's production is in thicknesses of ¼-inch to ¾-inch, but the process will produce panels ranging from ¼-inch to 1¼-inches. Boards can be made ranging in density from 38 to 55 pounds per cubic foot. Special order densities can be produced as well as special-order sizes. These may be specially manufactured or cut-to-size.

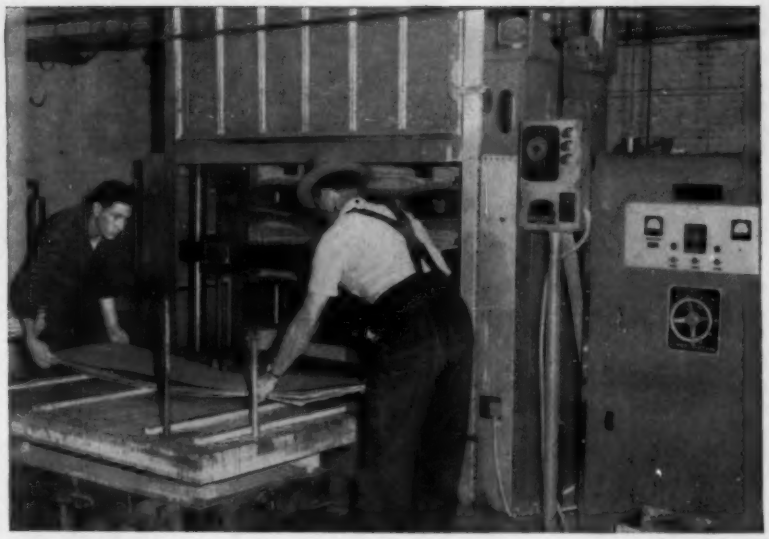
Par-Tile, a specialty product, was described in the July 1958, ANNUAL BOARD REVIEW of THE LUMBERMAN. Embossed pattern board, also described in the BOARD REVIEW produces another example of the plant's versatility in board production

(Continued on page 82)



INTEGRATED PARTICLE BOARD PLANT *(Continued)*

GLUING VENEERS for curved panels prior to hot pressing. Core is poplar; surface veneer is walnut, mahogany, cherry or oak—all dried to 6% moisture content.



VENEER PACK, up to 13 ply, goes into forms in electronically heated press which exerts 150 to 175 p.s.i., cures panels in 3 to 5 minutes.

WORKER REMOVES formed panel as fresh pack goes in from other side. Press stays open only 30 to 45 seconds. Three men are needed for maximum production.

FORMS, made in firm's shop, are laminated fir plywood covered with 1/32 in. aluminum and cost from $250 to $500 each. Metal bands at ends transmit heat to pack. Sheet of 1/20 in. hardboard is used as liner under metal sheets to help provide cushioning, uniform pressing surface.

Electronic Hot Press Averages Curved Form Per Minute; Uses Shop-Made, Low-Cost Forms

ELECTRONIC PRESSING turns out an average of more than one curved or serpentine panel each minute at Kent-Coffey Mfg. Co., Lenoir, N. C. "The electronic hot press system produces curved forms more economically, rapidly and accurately than the band sawing system we formerly used," says Harry E. Beatty, plant superintendent.

"The press produces up to three curved forms at once in a press cycle that ranges from 3 to 5 minutes" he says. "Our daily production of curved forms ranges from 2,700 sq. ft. to 3,000 sq. ft."

Ralph H. Martin, glue and veneer room foreman, points out: "Installation of the electronic hot press system meant greater utilization of our veneer room. Moreover, it eliminated a great deal of work from the rough mill which formerly cut the stock used for the laminated blocks for band-sawing of curved panels. In that operation, waste often ran as high as 70%. Thus we have saved time and freed highly paid personnel for other skilled work.

We also find there are far fewer rejects than occurred under the old system during sanding operations and our electronically cured panels are more uniform and accurate."

The press described here is a Lodge & Shipley "Columbia" High-Frequency Press specially designed for the production of better curved panels . . . chair seats and backs, case goods, cabinets, fronts . . . at low cost. Because cure time is measured in minutes, you get high production from a single set of forms. Floor space formerly used for curing storage can be used for profitable production. Small lot production is practical.

The Columbia High-Frequency Press gives double versatility; it is quickly switched over to conventional cold press work. High-Frequency equipment and shielding meets all FCC requirements. For complete details, request Bulletin No. HP-17 from:

THE Lodge & Shipley COMPANY

3060 Colerain Ave., Cincinnati 25, Ohio

COLUMBIA PRESSES for the wood and wood products industry

Photos and data courtesy WOOD AND WOOD PRODUCTS

as well as the plant's integration. The same machine embossing plywood also works particle board.

In addition to the tile and embossed plywood, pegboard is also custom-drilled. All Pacqua products may be furnished in fungus and termite-resistant forms. These are called "IRB boards." Edge-sealing and oiling of panels is also done for concrete forms in a conventional plywood oiler.

Pacqua sales are handled through Plywood Service, Inc., Pacific Plywood's sales company. John Longfellow is sales manager with William Gray assistant manager in charge of particle board sales.

Pacqua presses its board to required density and sands to thickness. Quality control is a teamwork proposition between the forming operator and press operator. Panel weight and thickness deviation are the controllable items. If the press operator notices a variation in thickness through deviation from standard thickness of the entire press load, he notifies the mat-former who corrects the mat weights. Any small deviation in single panels is multiplied when the entire press-load is checked, enabling quick, accurate control of the load thickness.

Under-thickness boards when they develop are not lost, but are sanded down to the next thickness. Grading is done on the off-end of the sander where minor defects in smoothness and porosity are caught. Underlayment and core board are the two principal standard products manufactured.

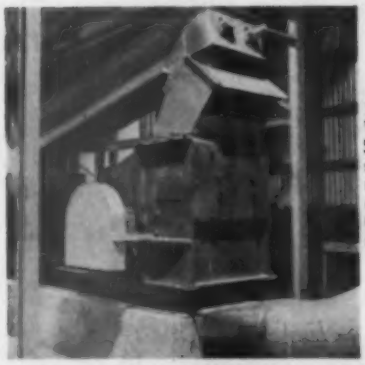
Four men operate the production line: a dryer operator, mixer operator, forming machine operator and pressman. Production capacity is 32 million square feet, ⅜-inch basis, on a three-shift five-day week annual basis.

Panels are sawed on the same Globe skinner and cut-off saws installed for plywood panel equalizing.

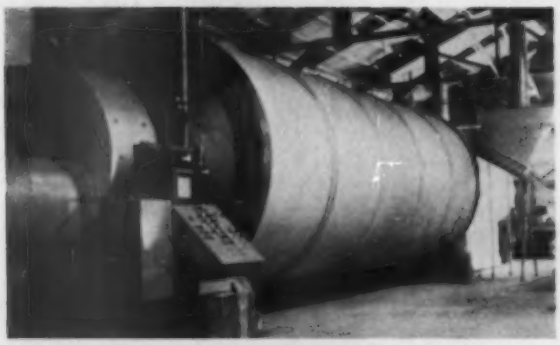
The particle board plant was built joined to the existing Pacific Plywood sizing and sanding area. This enables panels, after completion of the 48-hour cooling period, to be moved directly for sizing and sanding. The centralized finishing department location allows efficient scheduling for sizing and sanding plywood and board panels.

Panel storage is in the plant, proper, with space available for up to one million feet of ⅜-inch sanded board.

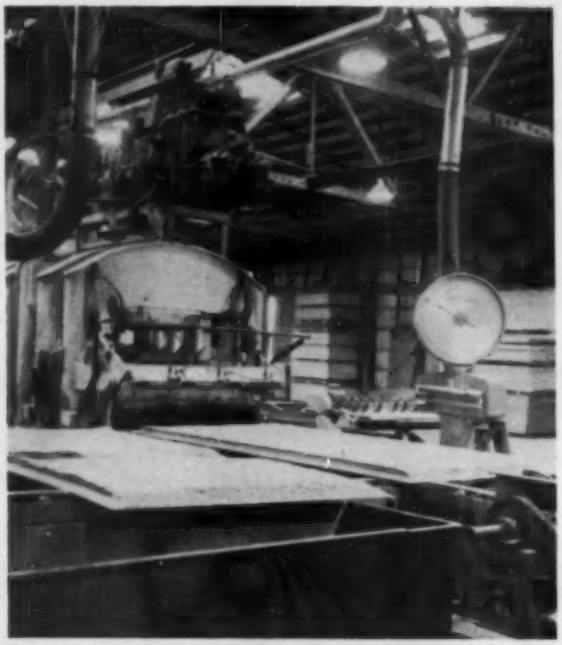
THIS IS THE PACQUA PRODUCTION LINE



1. Particles processed in Williams hammermill. Screw-conveyed from surge-bin. From hammermill air-conveyor to dryer. Delco motor on mill, General Electric motor on blower.

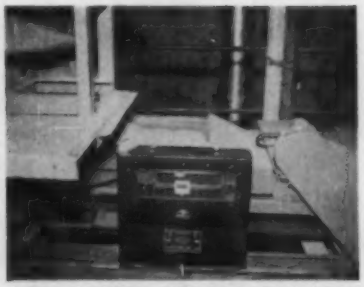


2. Particles next are dried in Heil dryer. Unit is oil-fired. Particles introduced at left, air-suspended length of dryer, and picked up at far end to be air-conveyed to shaker screen.

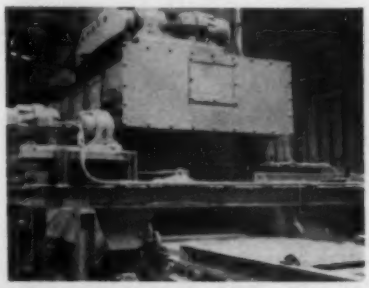


6. Cauls offbear across Fairbanks-Morse scales where operator checks weights. Mats falling outside limits are kicked off across reject transfer (foreground); Richards pre-press (left) prepresses mats.

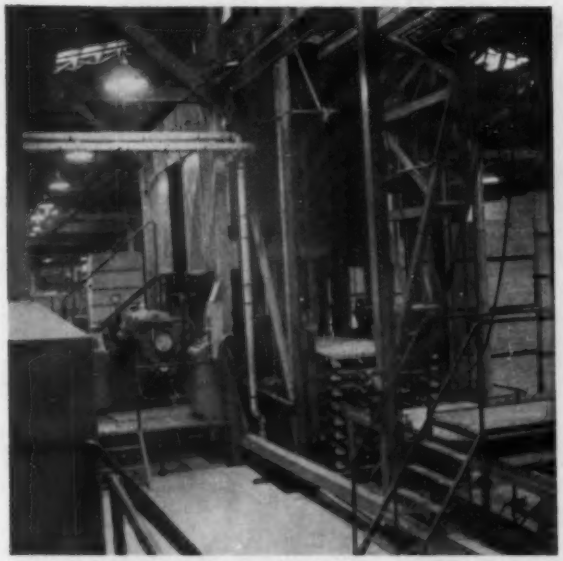
3. Particle grading is done on Allis-Chalmers shaker screen. Fines are blown to the fuel-bin. Accepts blown to dry surge bin.



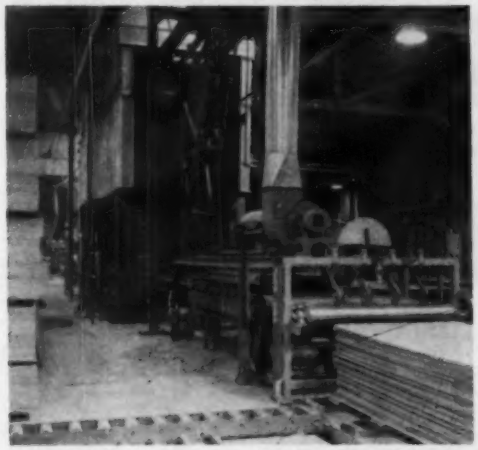
4. From dry bin, particles are metered through Way-Trol to Grenco blender under machine where resin, wax emulsion and water are added.



5. From blender, chips are blown to Columbia Microfelter forming machine. Felter meters blended particles onto cauls to form mats.



7. After pre-pressing, cauls enter American press-charger to be transferred into Williams-White 20-opening press. Press steamheated from company boilers. American Sheet Metal press hood.



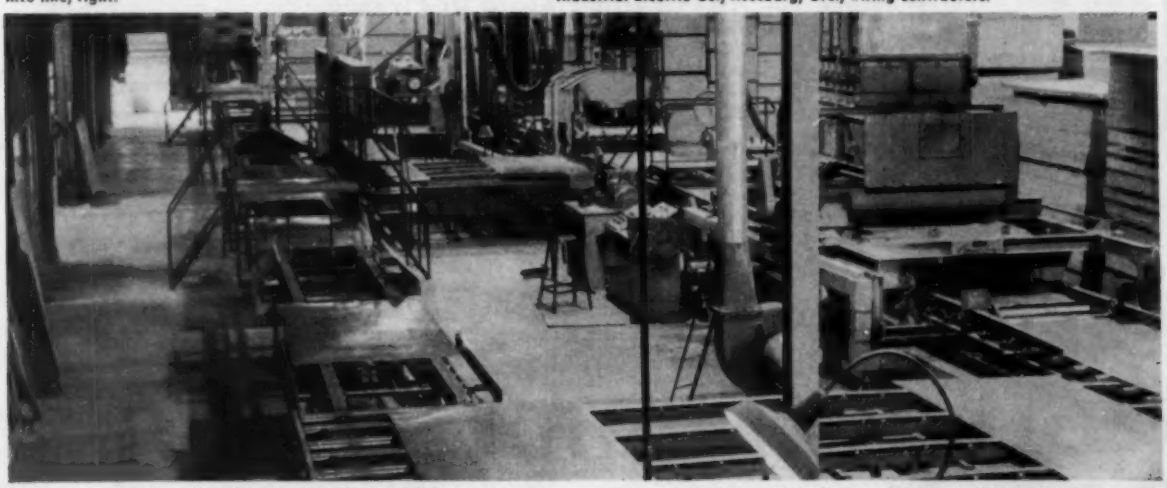
8. Cauls offbear from press to American receiver, thence to vacuum separator with pressed panels offbearing to stack at right. Vacuum lifts panel from caul and caul conveyed back into line, right.

10. Following 48-hour cooling period, panels are skinned and trimmed on Globe saws. Panels fed at left through skinner saws, transferred through trim saws in foreground, automatically stacked at right.

11. Sanding is final step before stocking or shipping. Solem 8-drum sander does double-duty, sanding both plywood and particleboard. Clark lift truck serves sander.

MACHINERY AND EQUIPMENT

Blower system from veneer plant to particle storage: Rader feeder, Sutorbilt blower, Caruthers Sheet Metal, Eugene, Ore., blowpipe; green surge bin by Sprout-Waldron, Muncy, Pa.; Williams Patent Crusher & Pulverizer Co., St. Louis, Mo., hammermill, powered by Delco motor; Medford Blowpipe blower systems powered by GE motors; Heil dryer with Wheelco instruments; Allis-Chalmers shaker screen; Way-Trol metering scales; Proportioneer resin metering pump; Grenco blender; Columbia Microfelter mat-former; Cenco moisture balances; Fairbanks-Morse scale; Ross Operating Valve Co., Detroit, Mich., air control valves; Richards Mfg. Co., Eugene, Ore., pre-press; Williams-White 20-opening hot press with American Sheet Metal Works press hood and American charger and receiver; Oilgear hydraulic pump; Masoneilan pressure gauges; Bristol Co., Waterbury, Conn., temperature gauges; Foxboro recorders; Micro-flex timers; American vacuum separator; Globe equalizer saws; Solem 8-drum double deck sander; Clark lift trucks; Adjusto-Spede controls and motors by Dynamatic division, Eaton Mfg. Co., Kenosha, Wisc.; Alwatt Co., Modesto, Calif., wiring gutter; Allen-Bradley control centers; control panels by Coast Electric, Portland, Ore.; General Electric, Allen-Bradley and Microswitch limit switches; Cascade Saw & Tool Co., carbide saws; Jenkins double-end tenoner; Industrial Electric Co., Roseburg, Ore., wiring contractors.



9. From separator, cauls proceed toward foreground through suction cleaner which cleans cauls, through water sprayer, across tansfer, back into mat-former at right and through balance of production line. Sawing and sanding done in plywood plant at far end. [END]

SOLEM DOUBLE-DECK SANDERS BRING PARTICLE BOARD TO EXACT THICKNESS

Outfeed end of the Solem Eight-Drum Double-Deck Sander, processing particle board at the Pacqua Inc., Division of Pacific Plywood Co., Dillard, Oregon

SOLEM'S NEW PLANT IN ROCKFORD

Solem's new plant in Rockford, Illinois, is conceived and planned with the idea of bringing Solem Machine Company and the Merritt-Solem Division together under one roof as soon as possible, to more closely integrate and expedite the entire operation. This large plant will make it possible for us to pass still greater benefits along to our customers and provide them with still better service.

ONE PASS THROUGH THE SOLEM

One pass through the Solem Double-Deck Sander is all it takes to bring particle board to exact thickness required and smooth both sides at the same time . . . that's real production. No duplication in handling . . . the rough board goes through the Solem and comes out finished, directly to the waiting lift truck as shown above, to be transported to railroad car or shipping room.

Veneer Lathes

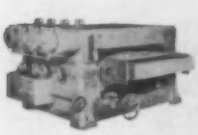
Whether You Make Particle Board Or Plywood

You'll find a ready need for the Solem Double-Deck Drum Sander and its huge work capacity. You can shift from Plywood to Particle Board quickly if your production requires it . . . it's all the same to the Solem. There are no drum marks; drums oscillate 236 times per minute. Micromatic Dial for quick setting.

Veneer Clippers

Lathes, Clippers, Jointers, Presses

Merritt-Solem Division in Lockport, New York, makes other machines needed in veneer and plywood production, shown on this page.



Solem Endless-Bed Drum Sanders

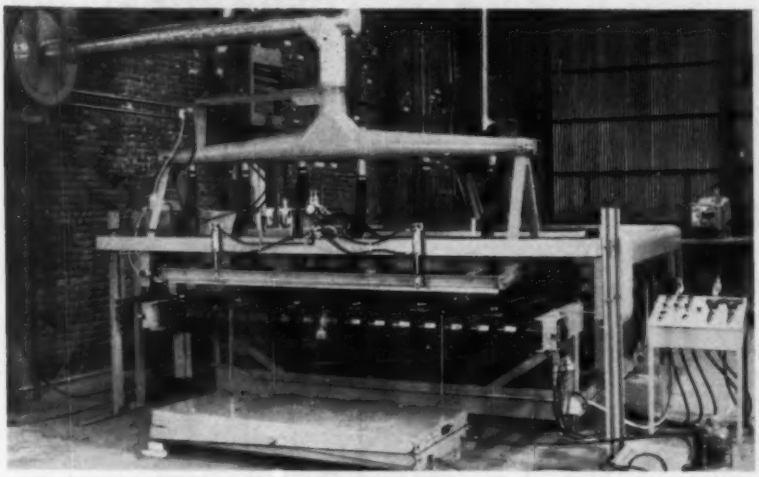
Hot Plate Presses

Write Today For More Information

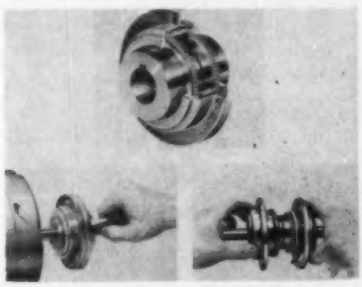
Veneer Jointers

SOLEM MACHINE COMPANY

ROCKFORD ILLINOIS



VACUUM OPERATED SEMI-AUTOMATIC VENEER FEED to its edge gluers is a recent addition to the line of E. V. Prentice Machinery Co., Portland, Ore. Six suction heads drop down and pick up a sheet of veneer, place it on the feed table for edge gluer.



Link-Belt Adds New Geared Flexible Coupling

A new low cost geared flexible coupling for shaft diameters up to 1⅞ inches has been announced by Link-Belt Co. Called the type MC, it is designed especially for use as a motor coupling.

Basic principles of operation are like those of a conventional geared coupling. Coupling sleeve is of one piece design and the coupling is enclosed in a two-piece metal cover which is sealed.

The coupling uses spiral cam-locking fasteners which join the cover flanges. These fasteners are permanently assembled as part of the cover halves and require only a quarter turn for fastening or detaching.

●

Rust Solvent

Spray Products Corporation, Camden, N. J., has developed a new formula for a rust solvent called Spray Nuts-Off. It is a combination of oils, penetrants and rust solvents. Typical applications are cleaning small parts, spark plugs, battery terminals and carburetors and for loosening bolts.

"Cut down", Finish In One Operation

Timesavers, Inc., has developed a new process for finishing of wood panels which it says will accomplish "cut down" and finish sanding in one pass over one abrasive belt through a T. O. P. Model of SPL polishing platen machine.

A contact roll does the cut down and a platen located adjacent to the roll does the polishing. An abrasive belt of 4, 5 or 6 grit is used; 5/0 abrasive will give a finish.

Sawdust created in the cutting down operation is carried forward to form a cushion over the platen, cushioning the sanding cut at that point to produce a smooth finish, the manufacturer reports.

●

Dodge Expands Lines Of Flexidyne Drives

Capacities of from ¼ to 1000 horsepower are available in the expanded line of Flexidyne dry fluid drives and couplings manufactured by Dodge Manufacturing Corp.

Added to the line are three larger sizes and a new small size for low horsepower applications. An 18-inch diameter Flexidyne is now available either as a drive for use with V-belts or as a coupling for direct shaft-to-shaft connections. Either will develop 200 horsepower at 1200 rpm. Largest of the new units is a 27-inch coupling with a horsepower rating of up to 1000 at 900 rpm.

For medium light applications a 6-inch unit has been added, rated at 2 horsepower at 1800 rpm.

Push Button Edger Conversion Kits

Mater Machine Works has added a kit for converting edgers to push button control to its line of mechanization conversion kits. The kit contains a Mater position unit, push button control panel, chain, sprockets and all installation prints and instruction for conversion. The simple Mater kit is packaged to convert two-saw edgers which use a band wheel to position both saws. More complex kits are available to convert multiple saw edgers to pre-set push button control.

Almost any number of push buttons are available with the Mater packaged kit. An over-riding push button is also provided to give settings different from the pre-set arrangements. Electrical controls of gearhead motor are connected to Mater edger brain box unit containing Mater cams, limit switches and a memory device to inform the motor in which direction to go.

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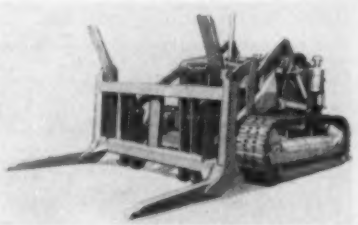
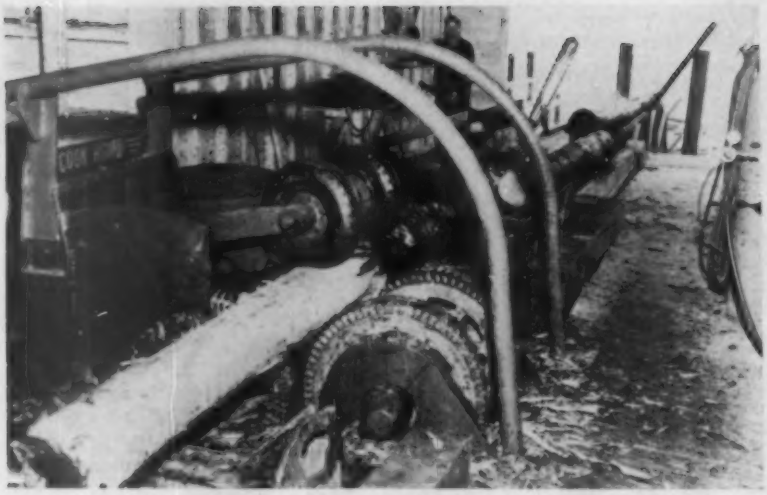


New Log Fork Designed For No. 977 Traxcavator

Caterpillar Tractor Co. has introduced a log fork specifically designed to give increased log-handling efficiency to the Caterpillar No. 977 Traxcavator. It joins the log and lumber fork introduced in 1956 for the No. 977 as a special application tool for handling large loads of timber. It is intended specifically for handling large saw logs.

Available with the fork are twin, hydraulically operated top clamps, which permit the handling of off-center loads. The specially designed clamps replace the 2-foot top standards which are standard for the fork.

Forward reach of the fork at ground level is 7 feet, 3 inches and at a maximum lift height is 6 feet, 9 inches. Maximum forward reach is at a height of 6 feet when the forward tip of the tines extend 9 feet, 1 inch forward. With the fork at its highest position, clearance between the ground and hinge pin is 12 feet, with maximum unloading clearance (tines level) being 11 feet, 10 inches.



Nicholson Barker Designed for 8-30M Capacity Mill

The Coon-Hound barker, latest by Nicholson Manufacturing Co., is designed for sawmills producing from 8000 to 30,000 feet of lumber a day. With bark removed by segmented scraping blades, negligible fiber loss occurs and feed speeds up to 50 feet per minute are achieved. The Coon-Hound barker is fully reversible.

Logs from 3 to 26 inches in diameter, from 2 to 32 feet long can be handled with maximum length determined only by the amount of crook or bow present. Feed rate depends primarily on the diameter of the log, tightness of bark. An example of production is about 4000 board feet (Doyle scale) of logs averaging 50 board feet per 16-foot log, per hour.

Double Cut-Off Saw For Smaller Plants

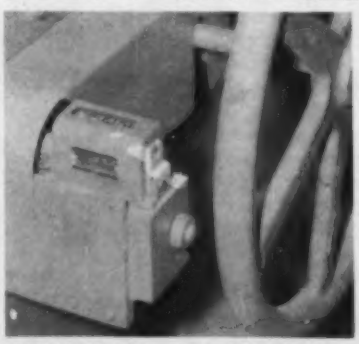
Mereen-Johnson Machine Co. is introducing a lighter adaptation of its regular No. 600 Model for use in smaller plants or in special set-ups. The new unit, the Model D, comes in the regular variety of double cut-off saw sizes. A standard machine is 48 inches between saws, 30 to 69 inches ahead of hold downs and has a 4-inch minimum trim length and a 4-inch maximum trickness of cut.

Motor driven feed drives come with either a fixed feed rate or a variable speed. Two 3-hp 3600 rpm trim motors drive the regular cut-off saws that tilt up to 180 degrees and cut either above or below the feed chains, adjustable on rack and pinon by hand wheel. It is available with cope motors and dado arbors.

All starters and wiring are standard equipment.

Canadian Distribution

Mill Equipment, Inc., Seattle, Wash., manufacturer of Selectric sawmill machinery, has announced a new distribution arrangement in Canada for its line of sawyer-operated setworks equipment. Elsworth & Co., Ltd., Vancouver, will handle manufacture of the electric controls for distributor and original equipment sales of Selectric setworks equipment. In addition, Elsworth will share with Akhurst Machinery Co., Vancouver, distribution for western Canada on Selectric remote controlled setworks systems, ranging in size from 2 to 30 horsepower.



DIAL INDICATOR developed by Black Bros. Co. indicates the opening between the coating rolls on glue spreaders, roller coaters and rotary presses to a thousandth of an inch.

PERSONALITIES

URS BRENNWALD, former technical engineer, has been upped to executive vice-president of Fjellman American, Inc., manufacturer of hot plate presses. His early experience in equipment design and manufacture was gained in Sweden.

JOHN H. HARTLEB is now field engineer in the Los Angeles district office for Norton Company.

DICK YOUNTS has been promoted to factory sales manager of Freightliner Corp. in which post he will be concerned with new equipment sales of White-Freightliner trucks and tractors. He has been with the firm for five years.

WAYNE MORRIS, with Hyster Co. for five years in engineering, research and sales, is now special field service representative for the western states, British Columbia, Alaska and Hawaii.

WILLIAM A. MCAFEE has been appointed general sales manager, wholesale, for Standard Oil Co. of California. He has been with Standard since 1931 and most recently served as assistant general sales manager in wholesale.

W. A. McAFEE

JOHN CLARK

JOHN CLARK has been appointed vice-president and manager of Rader Pneumatics, Inc. of Tennessee, a newly formed company at Memphis, Tenn., which extends Rader Pneumatics' services. He was most recently vice-president and secretary of Wilco Machine Works, also Memphis.

HARRY H. NEUMANN has been appointed sales and service representative in the Denver, Colo., territory for Lewis-Shephard Products, Inc., Watertown, Mass.

DUANE R. BRANAKA is new sales manager of Valvair Corp. in which post he will supervise sales of the Valvair line of manual and pilot-operated control valves.

Goodyear Tire & Rubber Co. has named L. W. ADAMS manager of V-belt sales, replacing J. F. TAYLOR who is retiring. Adams has been with the firm since 1943 and served as Southern region sales manager since 1953. Southern region sales territories are being combined with other regions.

L. W. ADAMS ARTHUR DEMSKY

Nielsen Saw & Manufacturing Co., Roseburg, Ore., is increasing its sales staff as the result of the recent purchase of the Cascade Saw & Sales Co., Eugene, Ore. ARTHUR DEMSKY, for the past 11 years with Henry Disston & Sons, becomes sales manager and will supervise engineering of carbide saws and knives. New salesmen include GEORGE BENSON, formerly in design work with Nielsen, and BILL WEST, formerly with Woodbury Hardware Co.

CHARLES W. TUTTLE, formerly of the Indiana Foundry, a Diehl subsidiary, has been named a vice-president of G. M. Diehl Machine Works with the responsibility of coordinating activities of the various departments of the firm.

EDWARD I. BROWN is new director of engineering for the Machinery Hydraulic division of Vickers, Inc. He has been with the firm for five years and most recently was chief engineer, aero hydraulics.

E. I. BROWN A. E. AMADON

ARNOLD E. AMADON has been appointed manager of the Nycor Sales division of Graton & Knight Co. and will be in charge of distribution, promotion and merchandising of the nylon core belts. He has been with Graton & Knight since 1930 and has worked in all of the firm's manufacturing departments.

Automatic Strapper Listed by Acme

A fully automatic steel strapping machine, the F1J, developed by Acme Steel Co., applies strapping with uniform, predetermined tension to a wide range of package sizes without an operator. It has unlimited take up which allows a wide range between the maximum and minimum size of the packages strapped.

As the package moves into the machine on a short length of power conveyor, size of the package is sensed and the proper strapping pattern selected and actuated. Sealed joints are made with double spot welds. The F1J is easily integrated into existing conveyor systems.

Acme has also announced a power strap feed unit which will feed steel strapping around a package at the rate of five feet per second, eliminating the necessity of the strapping operator walking around the package. Also new at Acme is a steelstrap dispenser which weighs 12 pounds and requires only a slight effort to operate. It can be loaded with a coil of steel strapping by one man in less than a minute.

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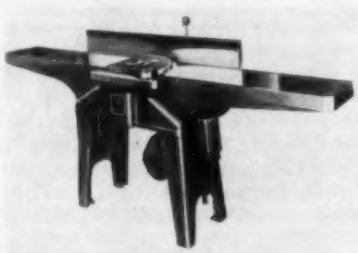


12-Inch Jointer New At Yates-American

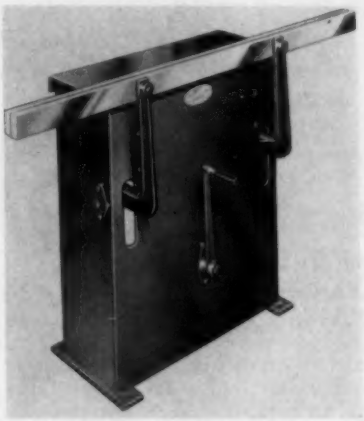
Yates-American Machine Co. is now producing a 12-inch jointer, a heavy duty belt-drive machine featuring solid cast iron construction and maximum safety.

A sturdy 8-feet by 12-inch table provides support for heavy production. Cutterhead knives can be individually adjusted. The machine is available less motor and switch, or with magnetic starter and 5-hp motor.

●

REDCO Names Representative

Republic Electric and Development Co., Seattle, has announced the appointment of George Osgood of the George Osgood Co., Portland, Ore., as sales representative, supplementing the existing representation for the firm's line of electric log carriage drives, automatic tray control systems, edger feeds, log barker drives and remote edger and resaw controls.



Armstrong Announces New Filing Clamps

New filing clamps have been added by Armstrong Manufacturing Co. which feature smooth, straight jaws that provide an accurate surface for gauging as well as lining up the saw teeth. The convenient clamping handle opens the jaws wide for easy saw loading and unloading. Jaws are balanced by a coil spring for smooth handling.

The saw raising and lowering device clamp quickly adjusts for exact height, then can be locked in position.

●

New Line Added

Canadian Sumner Iron Works, Ltd., Vancouver, B.C., is now Canadian representative of Controls and Communications Co., Eugene, Ore., which designs and builds automatic electrical, electronic, hydraulic and pneumatic control systems and apparatus. Canadian Sumner Iron Works is headed by Norman Terry. Principals in Controls and Communications are S. M. Batori and J. E. Balint.

●

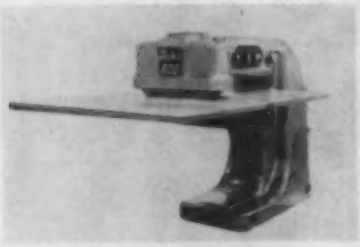
Fork Lift Attachments

The Construction Machinery division of Clark Equipment Co. is now offering fork lift attachments for all Michigan tractor shovels, including a size for the latest 6-cubic yard machine. The attachments are designed for quick installation, require no alteration for hydraulic connection. Capacities vary from 4000 pounds at 24 inches from heel of fork on the 1¼ yard Model 75A to 15,000 pounds on the 6-yard Model 375A.

●

Southeast Distributor

Sel-Set Machinery Corp., Salem, Ore., has appointed Wheland Company, Chattanooga, Tenn., as its exclusive distributor in the southeast for Sel-Set carriage, resaw and edger setworks, Elmer R. Worth Sr., president, reports.



High Speed Tapeless Veneer Splicer

Veneers from 1/16 to ½ inch in thickness can be spliced at speeds up to 150 feet per minute by a new tapeless veneer splicer developed by the G. M. Diehl Machine Works.

In operation, the Diehl No. 800 applies heat directly to glue that has been pre-applied to the edges of the veneer or lumber core. This new principle instantly heats the entire glued surface, regardless of thickness of the veneer, making possible high speeds.

Frame of the No. 800 is a one-piece casting with the feed motor and all controls enclosed within the frame. It is a roll feed machine with all rolls mounted on ball bearings. The unit is 48 inches long, 103 inches wide and 53 inches high.

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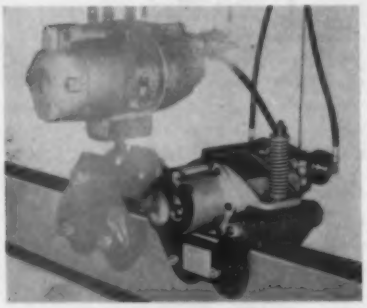

Powered Hoist Trolley With Positive Control

Gardner-Denver Co., Quincy, Ill., has announced a powered hoist trolley that allows one man to lower or move loads up to two tons with positive control.

Called the Hoistractor, it is powered by an axial-piston type air motor and exerts 250-pound drawbar pull on a beam through a spring-loaded neoprene drive wheel. It will pull a 2-ton load at 70 feet per minute. Speed can be varied from a slow creep to full speed of 150 feet per minute.

Two single 1-hand controls for hoist and tractor are available. The pendent control has a squeeze hand grip with up-down operating levers for the hoist and fore-aft levers. Depressing a lever operates the unit, but accidental lever pressure will not start operation because the air line is dead until the operator squeezes the grip. Increased pressure on the lever increases speed. Control hoses are available in 5, 10 and 15-foot lengths.

The second type control is the Stikontrol, a swiveled rod with 4-way grip control. Raising or lowering the grip raises or lowers the hoist lead; rotating the grip clockwise controls forward motion while counter-clockwise rotation controls backward motion.

The Hoistractor fits most standard size beams. It is easily adjusted to permit mounting on 4-inch, 7.7-pound to 18-inch, 54.7-pound I-beams. It can also be adapted to operate on other types of track.

●

Norton Increases Speed On Surface Grinder

The new Norton 6x18-inch Type S-3 hydraulic surface grinder has a maximum table traverse speed of 125 feet per minute, a substantial increase. In addition to reducing grinding time, the high speed reduces burn, checking and cracking of the work, the Norton Co. reports.

Also, the machine will grind a workpiece as high as 15 inches above the work table with a standard 8-inch diameter grinding wheel.

Other features include two hand scraped flat ways of the base that are long and wide resulting in the minimum bearing pressure per square inch and the straightest possible cross tracking of the saddle through a unique guide rail and preloaded ball bearing roller construction. Accurate hydraulic cross-feed at each table reversal is easily set up by a gradual dial type knob. A 2-speed vertical feed handwheel provides rapid movement for positioning in increments of .0001 inch.

●

Dryalator Representative

Orr & Sembower, Inc., Reading, Pa., manufacturer of the Dryalator packaged lumber dryer has appointed Wilco Machine Works, Inc., Memphis, Tenn., as sales representative. Wilco's area will consist generally from the timber fringe of Texas to the Atlantic, and from the Gulf of Mexico to the Kentucky-Virginia line. The exception will be North Carolina where Dryalator is handled by Dillon Supply, Raleigh.

●

• Western Gear & Manufacturing Co. will build a plant in Portland, Ore., for its operating company, Sheridan Gear & Manufacturing Co. The project will consist of 30,000 square feet of office, warehouse and manufacturing facilities.

Machinery at Work

TOWMOTOR MODEL 500 expedites truck and boxcar loading operations at Bates Lumber Co., Merlin, Ore. The fork lift truck also helps keep production moving at peak efficiency by transporting heavy bundles of veneer and rough plywood from one processing operation to the next. The lift truck shown here has a 5000-pound capacity at 24-inch load center.

UNION high frequency Electogluer has added to the production of Wurlitzer's DeKalb., Ill., plant to undertake edge bonding on stock from one-half to four inches thick, both hardwood and softwood. The unit has an electric eye control, control panel and handy press adjustments. It has an especially designed air-hydraulic pressure system which can give 10 to 400 powers per square inch of pressure on all material required. Glue line requirements of any thickness are automatically set by an automatic timer and power control to the generator. Push-over arms feed the material to a motorized layup operator-controlled conveyor.

I. W. JOHNSON redwood dogs installed on the I. W. Johnson carriage at Hollow Tree Lumber Co., Annapolis, Calif., are air-operated, have taper blocks. The carriage has a 60-inch opening.

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Quaker Oats Co., Chemical Division, Chicago, Ill.
Reichhold Chemicals, Inc., White Plains, N. Y.; Seattle; San Francisco; Port Moody, B. C.
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Gardner-Denver Co., Quincy, Ill.; Seattle; Portland; San Francisco; Denver, Colo.; Dallas, Texas
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AUTOMATIC SETWORKS
See "Setworks, Automatic"
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Timken-Detroit Axle Division, Detroit, Mich.
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Filer & Stowell Co., Milwaukee; Portland
L-M Equipment Co., Portland, Oregon
Nicholson Mfg. Co., Auburn, Wash.
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Soderhamn Machine Mfg. Co., Talledega, Ala.; Portland, Oregon
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Timken Roller Bearing Co., Canton, Ohio
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Pacific Saw & Knife Co., Portland
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland
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Anderson Blowpipe & Mfg. Co., Seattle, Wash.
Archer Blower & Pipe Co., Seattle, Wash.; Portland
Conveyair Company Ltd., Vancouver, B. C.
Medford Blowpipe Co., Medford, Ore.
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9'x13" Fx2 3/8" thick, bottom
8'x10" Fx1 1/8" thick, top
8'x10" Fx2 1/8" thick, bottom
Steam feed 14"x18" geared, with drum
Steam feed 14"x18" direct, with drum
No. 3 Trout setworks
No. 4 Trout setworks

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No. 95 Covel circular saw grinder
No. 84 Blackmer saw gummer
72" capacity Covel hand gummer
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Anvil 12"x16"x5" chilled
Anvil 10"x12"x5" chilled
Anvil 14"x36"x5¼" chilled

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300 HP, 600 RPM, 2200 V. S.R.
200 HP, 505 RPM, 2200 V. S.R.
200 HP, 1200 RPM, 440 V. Ind.
200 HP, 514 RPM, 2200 V. Ind.
1 Falk Reducer 15 HP 76:1 ratio
1 Prescott Reducer 15 HP 80:1 ratio
200 HP, 900 RPM, 2200 V. Sync.
200 HP, 490 RPM, 2200 V. Ind.
75 HP, 900 RPM, 440 V. Ind.
75 HP, 720 RPM, 440 V. Ind.
75 HP, 514 RPM, 440 V. S.R.
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1—15 H.P., 154 RPM Sterling gear head.
150 HP Motor, 1800 RPM, 440 V, Ball Bearing

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No. 94 6x9 6-knife planer
No. 99A-5-36 knife grinder

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Ray Burner, 400 HP, turbine driven
50-lb. "Modern" power hammer
300-lbs. steam hammer
2 Sumner Standard shingle machines
860' 4-strand, 1 1/8 tarns. rope, new
500' 10" C. I. universal pipe
400' No. 78 slasher chain
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1 Delta table saw with 1½ HP, 3-ph. motor
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Used 77A Yates-American
No. 4 Stetson-Ross

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New Diamond No. 25 hog
New Diamond No. 135 hog
New Diamond No. 145 hog
Used No. 45 Diamond Hog

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New 20" Marathon cant gang
New 20" Marathon for logs or cants
New 28" Marathon No. 300 for logs, cants, or both
New 28" Marathon No. 400 divided roll cant gang

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Used 8' McDonough band mill
Used 15' Wheland 3-block air opr. 48" opening
Used 48" opening all steel, air opr. 3-block carriage

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Used 300 HP, 600 RPM GE Slip Ring & Control
Used 250 HP, 600 RPM West Slip Ring & Control
Used 200 HP, 900 RPM SB Westinghouse
Used 150 HP, 720 RPM SB Westinghouse
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Western Machinery Corp., Portland

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Stetson-Ross Machine Co., Inc., Seattle

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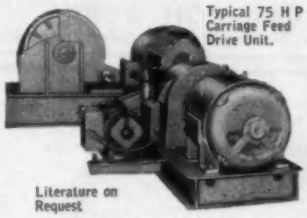
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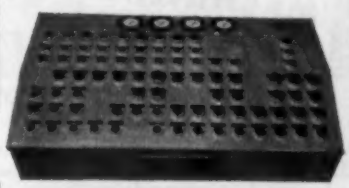

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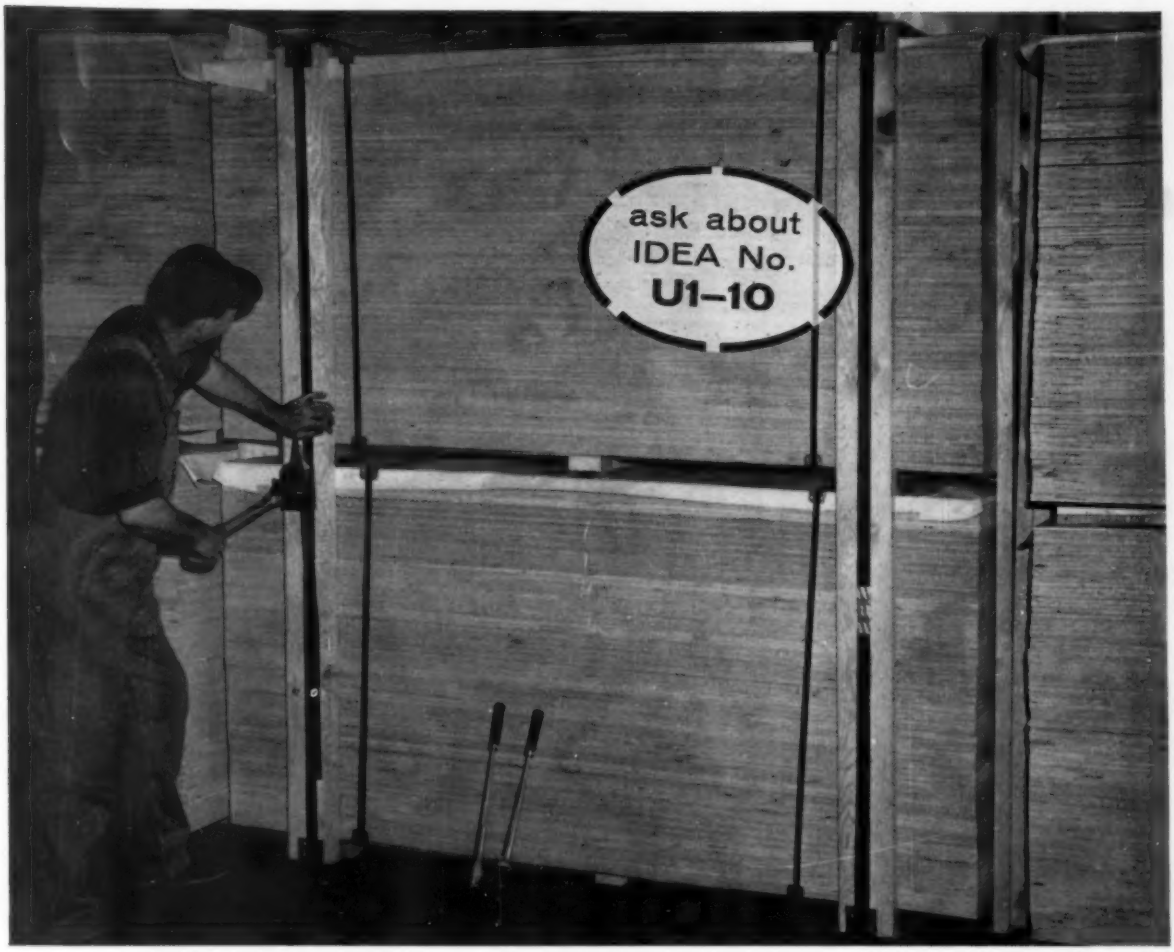

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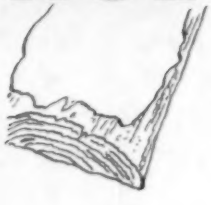

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